

# MagicQ User Manual

VERSION 1.3.0.0

This manual is designed for operators of the MagicQ lighting console to help them quickly and effectively learn how to use the console. It has been written by lighting designers for lighting designers. The reader is assumed to have a basic familiarity with the concepts of lights and lighting control systems.

The manual starts with an [introduction](#) to the MagicQ lighting console – its features, functions and concepts. It then moves into detailed descriptions of patching, programming and playback.

Readers who are tight for time and just want to find out how to quickly program a working show should turn straight to the [Quick Start](#) section.

The main chapters include:

[Introduction](#)

[Console Concepts](#)

[Quick Start](#)

[Common Actions](#)

[Patching](#)

[Setting Dimmer Levels](#)

[Controlling Intelligent Heads](#)

[Palettes](#)

[Programmer](#)

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[Playback](#)

[File Handling](#)

[Settings](#)

[Advanced Programming](#)

[The MagicQ at a glance](#)

[Button Functions](#)

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## 1 Introduction

The MagicQ console supports an extensive array of functionality to enable lighting designers to quickly and easily realise their innovative and imaginative designs.

- Twelve full 512 channel universes (6144 channels)
- Up to 202 playbacks
- DMX512, Art-Net, Pathport, many 3<sup>rd</sup> party DMX dongles
- Extensive personality library.
- In-built personality editor
- Colour mixing library including Lee and Rosco colours
- Flexible control of both heads and generic lighting
- Cloning and Morphing of heads
- Thousands of cues and cue stacks
- Naming of all items
- Virtually unlimited internal show storage & show merging
- FX generator with extensive FX library
- Immediate control of any chase / FX parameter
- Powerful over-ride mode
- Fully featured PC version (can be used as an off line editor)
- Network connection for remote operation
- Export and import of patch data to spreadsheets / databases
- DMX input, over-riding, merging and testing option

The console has been designed to be as flexible as possible so that it can be used equally well for pre-programmed shows / tours or for busking festivals. Significant attention has been given to ensuring that all key parameters can be changed during run – for example it is possible to change any FX parameter at the touch of a button.

Ease of use and speed of programming have been at the forefront of the design process ensuring that the lighting designer can patch and program a show in the minimum amount of time without complex button sequences and multi level menus.

The first few chapters of this guide describe an overview of the console and how scenes, chases, fx and environments work. If you wish to dive straight into programming a show then turn to the Quick Start section.

### 1.1 Which console model?

The MagicQ lighting console is available in several different models all utilising the powerful MagicQ operating environment. The MagicQ operating environment provides an easy to use operating environment for both programming and playback of shows. A show can be programmed on one model and then played back on a different model.

The MagicQ operating environment supports 202 playbacks in total – which can be all be accessed either through physical playbacks or through the touch screen. The different models in the MagicQ have different numbers of physical playbacks and buttons, which enables the size of console to be matched to the show.

The fully featured MagicQ PC enables shows to be pre-programmed on a PC (Windows, Mac or Linux) thus enabling Lighting Designers to design and program their shows in advance. Transfer of show data

between the PC and the console uses standard high capacity USB memory sticks, or a direct network connection.

MagicQ PC supports the same functionality and user interface as the physical consoles making it easy to move between the two products. MagicQ PC can also be used to run complete shows, either as a back-up to the main console or as console in its own right.

Connecting the MagicQ PC Wing to MagicQ PC gives the playback and programming control of the MagicQ consoles (faders, encoders and buttons) but with a small lightweight (6KG) solution that can easily be carried onto an aeroplane as hang luggage.

All MagicQ console products are built upon the mission critical Linux operating system. MagicQ PC can run under Windows, Linux or on Apple Macs.

## **1.2 DMX512 and Art-Net outputs**

The console supports both DMX512 serial and Art-Net and Pathport options. A LAN connector on the rear panel provides an Ethernet interface for up to 12 universes of Art-Net or Pathport. This enables the console to be connected directly to Art-Net or Pathport based installations.

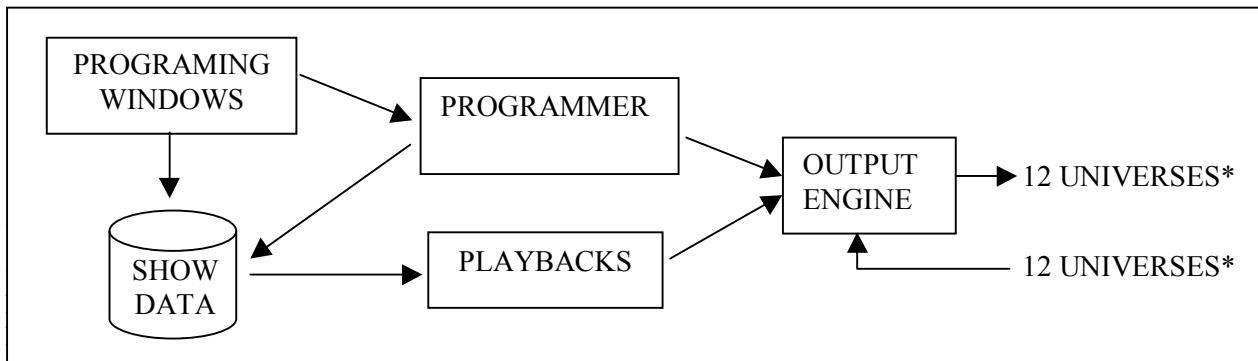
DMX512 serial outputs are available from the console using a simple Art-Net to DMX converter box. The console is supplied with a 3 universe converter box enabling 3 of the 12 Art-Net universes to be output on DMX512 serial. For systems requiring all 12 universes on DMX512 serial, additional boxes may be purchased

The provision of both Art-Net and DMX512 serial allows a choice of which protocol is used to connect between console and stage. The Art-Net to DMX512 convertor box may be situated at the console or at the stage – whichever is most appropriate.

For new systems it is likely to be more cost effective to run a pair of Ethernet cables rather than a much larger number of DMX512 cables. The Ethernet cables support both DMX512 inputs and outputs. However, there is obviously a large amount of serial DMX cable already in use and thus the changeover is likely to be gradual.

## 2 Console Concepts

A system diagram of the console is shown in the diagram below



\* standard 12 universes except MQ50 (6)

The console utilises USB memory sticks for transferring of show data to and from PCs and for back up purposes. USB memory sticks are ideal for this function; small and easily portable they can fit on a key-ring or lanyard, data for many different shows can be quickly and reliably transferred to them. No longer need we suffer from the limited capacity and poor reliable of floppy disks. USB memory sticks are universally supported by PCs and other computers, unlike custom memory cards traditionally used in lighting consoles.

Furthermore the Ethernet interface on the console can be utilised to access show files remotely over a network. This, for example, enables lighting designers to connect their laptops directly to the console.

### 2.2 Output channels

The console supports up to twelve DMX512 universes output over Ethernet. This allows up to 6114 channels of lighting to be controlled. Interface boxes are utilised to convert from Ethernet to serial DMX512 as appropriate.

Lighting consoles are often limited in the number of DMX channels or the number of intelligent heads they can control independently – typically 24, 48 or 96 channels. These channels typically correspond to the number of faders on the console. Some consoles offer a patching facility to allow multiple DMX channels to be patched onto one fader – but these DMX channels can then not be controlled independently.

The MagicQ console allows control of all DMX channels individually, whilst utilising grouping and programming functions to enable control of multiple heads or dimmers together.

The console provides a library of personalities – data for each of the different types of intelligent head available. This data determines how the different attributes of an intelligent head are controlled by the console.

Personalities are provided for most intelligent heads. Where a personality is not available, one can easily be written using the in built Head Editor. DMX configuration data is generally available from the manufacturer of the intelligent head.

#### 2.2.1 HTP / LTP channels

The console supports two types of channels, highest takes precedence (HTP) and latest takes precedence (LTP). Generally HTP channels are used for channels controlling dimmers and for the dimmer channel of intelligent heads. LTP channels are used for the attributes of intelligent heads such as pan, tilt, colour, gobo etc...

For HTP channels the value that is output onto the DMX line is the highest value of that channel on all of the active playbacks and the programmer. The console can be configured so that if a HTP channel is in the programmer it always overrides any active playbacks.

For LTP channels the value output is the value from the last active playback unless that channel is active in the programmer in which case the value output is the value stored in the programmer.

The last active playback is the last playback to be raised above zero, which is still above zero. Playbacks that are bumped in using ADD or SWAP buttons automatically become the last active playback until the button is released.

The type of channel used by the console is determined by the personality used to patch the dimmer or intelligent head.

Playbacks can be set so that all channels controlled by the Playback act in a LTP way, thus allowing Intensity channels to be overridden by a single Playback.

## 2.3 Cues

The console stores lighting states as Cues – each Cue stores

- Level information
- Timing information
- FX information

The Cue stores level information for each of the channels recorded into it. If the channel level was set using a Palette, then a reference to the Palette is also stored so that the Cue can keep track of changes to the Palette.

The Cue stores timing information for the channels that have been recorded into it. There are two options for timing information:

Simple:            Stored for each type of attribute (HTP In, HTP Out, Position, Colour, Beam)  
Advanced:        Stored on an individual channel basis

The Cue stores FX information for each of the FX that has been recorded into the Cue. The FX information includes the type of FX, the heads that the FX is applied to, and the FX parameters for each head.

Each Cue has a number (e.g. Q1) and an optional name.

## 2.4 Cue Stacks

Cue Stacks are used to manage sequences of Cues. Cue Stacks keep track of the order of the Cues and the options for how they are played back. A Cue Stack may have only one Cue associated with it or may have a whole list of Cues.

The Cue Stack stores a Cue Id and a textual field for each Cue so that the different steps in the stack can be labelled. The Cue Id and textual field are shown on the playback display when the stack is played back which enables operators to keep track of the current position in the show.

Cue Stacks can be configured to run as a chase rather than as a simple list of Cues. The difference is that as a chase each the timing of cue is determined by the chase speed and chase contrast rather than by the individual delay and fade times for each cue.

Each Cue Stack has a number (e.g. CS1) and an optional name.

## 2.5 Playbacks

The console enables playing of recorded show data through Playbacks. Playbacks are associated with physical faders and buttons – each Playback can have one cue stack assigned to it.

The console supports 202 Playback; 10 main Playbacks situated below the touch screen and up to 8 extension wings each with 24 Playbacks.

On models where less than 8 wings are fitted, the not fitted playbacks can be utilised through the touch screen and associated buttons.

## 2.6 Pages

The console supports multiple pages of Playbacks enabling Playback faders to have different functions depending on the current page. Typically one page is used for each song in a show.

The current page is selected through the NEXT PAGE and PREV PAGE buttons on the main playback section or by selecting a page in the Page Window.

The 24 Playbacks on each wing are divided up into two rows of 12 Playbacks. Each of the rows has separate NEXT PAGE and PREV PAGE buttons. This enables the Page used by these Playbacks to be set differently to the main Playbacks.

This provides significant flexibility to how shows are played back – for example one section of a wing can be used to control par lamps whilst another could be used to control intelligent heads. Changing the Page of the par lamps would not change the Page of the heads.

## 2.7 FX

The console contains a powerful engine for creating special effects (FX). FX can be applied to a group of heads at the touch of a button; there is no need to program lots of different Cues to create the effect. Special effects can be easily modified live, enabling, for example, the speed and size of the FX to be modified to match the mood of the show.

The console supports an extensive library of standard FX such as circles, squares, pan and tilt saws, lifts, zig zags, etc. In addition the console supports FX on colour, beam and intensity attributes. The console supports programming and storing of new custom FX, which can then be re-used in shows as required. The FX engine enables complete shows to be programmed within a matter of minutes.

## 2.8 Window layouts

The console provides a means of storing the positions and sizes of Windows as a Window layout to enable easy recall of useful Windows. This allows, for example, a Window configuration consisting of the Group, Position, Colour and Beam Windows to be stored and recalled at a button press.

The system supports several standard views, including several oriented towards programming and several oriented towards playback.

Window layouts are recalled by pressing CTRL and selecting one of the top soft buttons.

## 2.9 Shift Functions

The MagicQ lighting console uses SHIFT and CTRL buttons to enable access to advanced features. There is a SHIFT button and a CTRL button adjacent to the top corners of the touch screen in addition to the keys on the keyboard.

The SHIFT button is used with the cursor keys to enable selection of multiple items in Windows.

## 2.10 The Programmer

All recording of show data is carried out using the Programmer. The Programmer takes priority over all playbacks, and channels. It can also be used during live running to override the outputs – for example, for changing the colour or gobo of intelligent heads.

The Programmer can be considered to be a table of channel level and active flags for each of the channels patched onto the console. Initially (and after the Programmer has been cleared) all the channel levels are set to zero and all the channels are flagged as inactive. When a channel is changed to be non zero the channel level for that entry in the table is set to the new level and the channel is flagged as active.

The console outputs any channels that are marked as active in the Programmer at highest priority – i.e. they over-ride all other playbacks.

To clear the Programmer press CLEAR. All channels will be deactivated and all HTP channels will be set to zero. It is possible to force all LTP channels to zero by using CTRL CLEAR.

The programmer can be set into a Blind mode using the BLIND button so that the contents of the programmer do not affect the output of the console. This allows programming adjustments to be made during a live show and special effects to be “busked” in.

## 2.11 Help

The Help Window enables the operating manual to be viewed on-line. Press the HELP button at any time to open the Help Window. To close the window, press the CLOSE button.

Use the scroll encoder, the cursor keys, and the hyperlinks to navigate through the manual. You can go directly to a particular section using the top soft buttons, e.g. CONTENTS or QUICK START.

You can search through the manual by typing some text and pressing SEARCH. To search for the same words again, press SEARCH AGAIN.

## 3 Quick Start

This section is designed to enable users who are new to the MagicQ to quickly program and run a show.

### 3.1 Starting up the console

After powering up you are presented with the introductory Help Window. Close the Help Window by pressing the CLOSE button. You can revert to the Help Window by pressing the HELP button at any time.

Note that as the console utilises a hard disk system it is necessary to shut the console down before removing power to it. To shut the console down, press the SETUP button and then the QUIT soft button. When asked for confirmation, press the YES button. The console powers itself off when it has completed its shut down.

Removing power to the console when it is running may cause problems with the file system. Normally this will only result in a subsequent slow start-up whilst the system repairs the disk – however in certain circumstances the file system may become corrupted.

### 3.2 Erasing existing programming

Before programming a new show it is best to erase any existing programming from memory. Open the Setup Window by pressing the SETUP button.

Press the ERASE SHOW soft button. When asked for confirmation, select YES. You will then be asked for which initial mode you want the console to be set up for, Normal, Theatre Non Track or Theatre Tracking. If in doubt, select Normal.

Once the programming has been erased then the Input Window will indicate “Programming erased”.

### 3.3 Enabling console output

In order to output Ethernet or DMX512 data the universes must first be enabled. Open the Setup Window and select the DMX I/O view. The console supports up to 12 universes - you should configure the required output type for each universe and enable the universe by moving the cursor to the appropriate field and pressing ENTER.

### 3.4 Patching Heads

Open the Patch Window by pressing the PATCH button. The Patch Window has two possible views, VIEW HEADS and VIEW CHANS. Patching can be carried out in either view - in this section we describe patching in VIEW HEADS.

Choose the head you wish to patch by pressing the CHOOSE HEAD soft button. The Window will change to give you a list of heads. Select a head by pressing the touch screen. Alternatively scroll around the Window using the cursor keys, and press ENTER when the cursor is over the correct head.

Once you have chosen a head you will be returned to the Patch Window. Press the PATCH IT soft button to patch the head. You will be prompted for an address where you wish to patch the head. Press ENTER to patch to the next free address.

If you wish to patch multiple channels at fixed offsets e.g. four Martin Mac500s at DMX channels 1,21,41,61 then enter 4/20.

To patch a channel at a specific address use @. For example to patch 10 dimmers at DMX address 20 enter [10@20](#). To patch to the 2<sup>nd</sup> universe use [10@2-20](#).

To patch a dimmer, simply press CHOOSE DIMMER rather than CHOOSE HEAD and then patch one or more dimmers as above.

In the Patch Window all the fields coloured yellow can be configured. To modify a field, first move the cursor to the field, then input the new value using the keypad and keyboard, and finally press ENTER.

In this way you can modify DMX address, head number, head name and gel for each of your patched heads.

### **3.5 Naming and Numbering Heads**

Once you have patched all the heads you can then name and number them as you wish. It is recommended that you name the dimmer or the head based on its location (e.g. front wash / back truss SL). The name and gel are used to generate groups automatically.

For dimmers you may wish to configure the gel. This makes programming easier – enabling the console to auto program cues for you.

The gel field uses gel numbers. For Lee colours enter the gel number directly (e.g. 181 for Lee 181). For Rosco colours enter the gel number preceded by dot (e.g. .14 for Rosco 14). For no colour enter 0. If you would prefer to use colour names rather than gel numbers then simply enter the colour name.

To test a patched head or dimmer, simply press the TEST HEAD soft button and the head which the cursor is positioned over will be tested. For heads it locates the fixture; for dimmers it sets the dimmer to 100%. Press the TEST HEAD soft button again to turn test mode off.

### **3.6 Setting levels for Dimmers**

Once the appropriate heads and dimmers have been patched then programming of the show can begin. The Intensity Window provides the primary means for controlling the level of dimmers on the console. This window allows the levels for dimmers and for the dimmer attribute of moving heads to be immediately set in the programmer.

Select the Intensity Window by pressing the INT button. This window displays a fader for each dimmer and head patched onto the console. Pressing the slider part of the fader sets the appropriate level. When a fader is moved from 0 the channel in the programmer is activated – and the fader will turn red.

The SQUARE OFF soft button enables fast programming of intensities. Using the touch screen select the channels you wish to have at full and at zero – but don't bother being exactly accurate with the level of the selection. Pressing SQUARE OFF finishes the job by setting all channels that are less than 50% to 0 whilst setting channels above 50% to full.

Use the ALL TO FULL and ALL TO ZERO buttons to change the level of all the channels.

Press the CLEAR soft button to clear the programmer.

### **3.7 Selecting Heads**

In order to control intelligent heads it is necessary to be able to select which heads to use. The MagicQ console keeps track of the currently selected heads to enable it to determine which heads to apply changes to. The operator can select head individually or can use groups to recall configurations of heads that are used frequently.

The console automatically generates a group for all the heads of a particular head type. In addition new groups can easily be recorded.

The Group Window has two views. VIEW GROUPS enables selection of heads using groups whilst VIEW HEADS enables individual selection of heads.

In VIEW GROUPS, pressing the touch screen for a particular group selects all the heads associated with that group. All other heads are deselected. To select multiple groups, press SHIFT and a group to toggle the group in and out of selection.

In VIEW HEADS, individual heads are selected / deselected by pressing the touch screen. Use PG UP and PG DN to scroll through the heads.

### **3.8 Recording a Group**

Select the heads you want in a group in the VIEW HEADS view of the Group Window.

Change to the VIEW GROUPS view.

Press RECORD and then select the group you wish to record either by pressing the touch screen or by using the cursor keys and then pressing ENTER.

### **3.9 Naming a Group**

When recording a group, if you key in a name before pressing the touch screen (or pressing ENTER) then the group will be named at the same time as it is recorded.

You can name a group at any time by keying in the name, pressing SET, and pressing the touch screen.

If you do not have a keyboard then press SET and select the group to name by pressing the touch screen (or using cursor keys and ENTER). A keyboard window will be displayed for you to enter the name on screen.

### **3.10 Recalling a Group**

Once a group has been recorded then pressing the touch screen for the group will make all the heads in the group selected. All other heads will be deselected.

### **3.11 Locating Heads**

The first action you are likely to want to do is to locate the heads – i.e. to put them into a starting position. Select the required heads and then press the LOCATE button.

If the heads enable DMX control of the striking of the lamp then you may need to “Lamp On” the head in order to see the beam. Select the heads and then press SHIFT LOCATE. This runs the "Lamp On" macro.

### 3.12 Modifying Attributes

Intelligent heads have several different attributes typically including pan and tilt, colour, gobo and iris. When the MagicQ lighting console patches an intelligent head it maps the head parameters to standard attributes to enable easy access of the features of the head.

The MagicQ lighting console supports two ways to modify attributes – either using attribute types or using attribute banks. Both methods can be used interchangeably to program a show.

#### 3.12.1 Using Attribute Types

Attribute types is a powerful way of categorising attributes. Attributes are categorised into four types – Intensity, Position, Colour and Beam. On the MagicQ there is a window for each of these attribute types. Select the required heads, then open the required window.

The window enables the control of all the attributes of that attribute type using the eight rotary encoders. In the Beam Window there are more than eight attributes to be controlled – these are accessed using multiple pages of encoders – by pressing the NEXT PAGE soft button.

For indexed attributes such as colour wheels and gobo wheels, the button associated with each encoder can be used to bump the attribute value to the next range. Pressing SHIFT and the button bumps back to the previous range.

In addition the window enables selection of palette values for the attribute type using the touch screen. When heads are recorded the system automatically generates palettes for each attribute type. You can record new palette entries, or modify existing ones as you see fit.

#### 3.12.2 Using Attribute Banks

Attribute Banks is a traditional way to categorise attributes. The attributes are divided up into banks of two attributes each, and then can be accessed using two rotary encoders. Select the required heads and then press CTRL and the FX button (ATTR button on early consoles) to open the Attribute Window.

Choose the attribute bank using the top soft buttons. The leftmost soft button toggles between the two possible pages of attribute banks.

Use the rotary encoders and associated buttons to modify the attribute for all the selected heads.

Alternatively use the touch screen to select a range value.

### 3.13 Recording a Palette

To record a favourite combination of attributes into a palette (e.g. a rotating triangle with a prism on a MAC500), first modify the attributes to the values you wish to record. Then press RECORD and select the palette entry you wish to record.

To name the palette, key in the name on the external keyboard, then press SET and select the palette entry you wish to name. To use the on screen keyboard, first move the cursor over the palette entry, then press SET and key in the name followed by ENTER.

### 3.14 Adding in FX

To add a FX to some heads, select the heads then from the Group Window or the Prog Window press the ADD FX soft button. Choose the FX to add.

Once you have chosen a FX you are returned to the Prog Window. Use the encoders to modify the parameters of the FX such as the speed, size and spread between heads.

You can add multiple FX to a head, provided that the FX uses different attributes - e.g. you can mix a Pan Sine with a Tilt Sine.

### 3.15 Recording a Cue

To record a look onto a Cue, first set up the look, then press RECORD and press the SELECT button of the Playback to record the Cue onto.

To test the Cue, first clear the programmer by pressing CLEAR then raise the Playback fader or press the Playback flash button.

Note that recording a Cue onto a Playback, generates a Cue Stack with a single Cue. However, as there is only one step, it behaves as though it is just the Cue on the Playback.

To view a recorded Cue, press the SELECT button for the Playback, and then press CUE to open the Cue Window.

To configure options when recording, press SHIFT and RECORD, and the Record Options window opens. Choose the options you require then press the SELECT button of the Playback as above.

### 3.16 Recording a Cue Stack (Chase)

Recording a Cue Stack is the same as recording a Cue - you simply record multiple Cues onto a Playback and you end up with a Cue Stack.

So, for example to record a stack of two looks, the first yellow dots, the second blue triangles:

Generate the yellow dots look.

Press RECORD and press the SELECT button of the playback.

Generate the blue triangles look.

Press RECORD and press the SELECT button of the playback.

To test the Cue, first clear the programmer by pressing CLEAR then raise the Playback fader or press the Playback flash button.

View the Cue Stack by selecting the Playback and pressing CUE STACK to open the Cue Stack Window.

When you record more than one Cue onto a Playback the Cue Stack controls the transition from one Cue to another. By default the Cue Stack operates like a chase - i.e. each Cue is executed in turn, with timing being handled by a Chase Speed for the whole Cue Stack.

The timing mode can be changed, so that the Cues play back in a theatre style using the GO / STOP buttons. Press the CUE TIMING and CHASE TIMING soft buttons to modify the timing mode.

You can speed up recording by using multiple record mode. Follow the procedure above except that when you press RECORD for the first step, hold SHIFT and press RECORD. A toolbar of record options is

displayed at the top of the screen. Press the MULTI STEP soft button and then press the SELECT button of the playback as before. For each of the following steps simply generate the look and press RECORD. When you have completed all the steps press BACKSPACE to exit multiple record mode.

### **3.17 Playing back your show**

Now you have Cues and Cue Stacks recorded you can play back your show using the Playback faders and buttons. You can control how each Cue Stack is played back using the Cue Stack options – for example you can set the fader to control LTP fades or FX size and speed.

Remember if you get stuck at any point, just press the HELP button!

## 4 Console Layout

The MagicQ lighting console is built around the large touch screen, which allows the operator to view and modify show data quickly and efficiently. Directly around the touch screen are buttons and rotary encoders whose functions are displayed on the edges of the screen. In support of the touch screen, there are four additional areas of controls:

Playback area – faders and buttons to control the playback of shows

Head control area – rotary encoders and buttons to control heads

Editor area – buttons to control editing show data

Window select area – buttons to control the windows displayed on the touch screen

### 4.1 Touch Screen

The touch screen is at the centre of the console. It is used to display information and for selecting options for programming. The screen is divided into several sections:

- Soft buttons – buttons around the top and side. Function depends on the active window
- Windows section – large area in the centre for main control windows
- Status display – system information including current time and selected page
- Input display – keypad entry
- Playback display – information for each of the 10 main playbacks

#### 4.1.1 Colouring

The buttons on the screen are coloured to indicate the state of the information they represent:

Grey	Not programmed
Yellow	Programmed (editable)
Orange	Programmed (non editable)
Red	Active
Light Blue	Selected area

#### 4.1.2 Soft Buttons

The soft buttons are arranged around the top and sides of the screen. The soft button displays its current function – which is dependent on the active window. The button can be pressed either by pressing the screen or by pressing the associated physical button adjacent to the screen.

The soft buttons on the top generally are used for menu options. View options are normally on the left whilst more dangerous options such as record / remove are on the right.

The soft buttons on the sides are associated with the rotary encoders adjacent to them and are generally used for options relevant to the current function of the rotary encoders. The screen shows a description of the function of the encoder and below it a function for the button.

#### 4.1.3 Windows section

The area in the centre of the screen is the windows section in which the various control windows are displayed. There are two main types of windows – boxes style windows which have large boxes such as the Group Window and spreadsheet style editing windows such as the Patch Window.

A window is displayed by pressing the appropriate window button. Multiple windows can be displayed at one time by sizing the windows appropriately. In addition a complete configuration of windows – i.e. a complete view can be selected using CTRL and the top soft buttons.

When a window button is pressed, that window becomes the active window. The active window is on the top of the screen and is easily identified as the window with the highlighted title bar at the top. It is also the window with the cursor in it.

An item in a window can be selected either

- a) By pressing the touch screen over the appropriate part of the window
- b) By moving the cursor to the appropriate position and pressing the ENTER button.
- c) By moving the mouse to the position and pressing the left mouse button.

The cursor can be moved around the active window using the cursor keys in the Editor area of the console or via the cursor keys on the keyboard. PG UP, PG DN, PG LEFT and PG RIGHT can be used to scroll the window in the appropriate direction. HOME and END can be used to get to the start and end of the window respectively.

#### 4.1.4 Status Display

The Status Display shows the current date and time, the ADD / SWAP status of the console and other relevant status information.

#### 4.1.5 Input Display

The Input display shows the data that has been currently entered through the keypad and the keyboard.

A compact external keyboard is supplied with the MagicQ lighting console for setting names for data, such as Cues and Cue Stacks. It is also possible to use an on-screen keyboard on the touch screen for entering names.

The console supports standard keyboards, so users can utilise their favourite keyboard by plugging it into the keyboard socket.

#### 4.1.6 Playback Display

At the bottom of the screen is the playback display, which displays information relevant to each of the playbacks including the name of the cue stack assigned to the playback and the current step.

Playbacks that are active are coloured red. The selected playback has the top line coloured blue.

### 4.2 Playback Area

The Playback area is situated directly below the touch screen and consists of 10 playbacks each with a fader and four buttons (FLASH, GO, STOP, SELECT). The area above each of the playbacks on the touch screen is used to provide information about the status of the playback.

The playback area also contains a Grand Master, a Sub Master, Page Select buttons and a Manual Playback for taking control of Cue Stacks.

### **4.3 Head Control Area**

The area around the two large rotary encoders is referred to as the head control area. It is used to alter the parameters of individual heads and apply effects such as fans over groups of heads. There are 8 buttons:

LOCATE	Locates the selected heads
FAN	Enter / exit Fan mode
HIGHLIGHT	Enter / exit Highlight mode
SINGLE	Enter Single mode
ODD/EVEN	Enter Odd/Even mode
ALL	Select All (i.e. exit Single or Odd/Even mode)
NEXT HEAD	Selects the next head
PREV HEAD	Selects the previous head

### **4.4 Editor Area**

The Editor area contains the Cursor Control, the Numeric Keypad and the Action Buttons.

#### **4.4.1 Cursor Control**

This includes the usual LEFT, RIGHT, UP, DOWN, PAGE UP, PAGE DOWN, HOME and END buttons for moving around Windows. In addition a PAGE LEFT and PAGE RIGHT button enable scrolling of windows left and right.

It is also possible to use the cursor keys on the external keyboard to perform the same functions. The Insert key on the keyboard performs the PAGE LEFT function whilst the Delete key performs the PAGE RIGHT function.

#### **4.4.2 Numeric Keypad**

This includes the standard numbers and symbols. It also includes special buttons such as @ and FULL.

#### **4.4.3 Action Buttons**

The action buttons control the programming modes of the console.

RECORD	Records show data
REMOVE	Erases show data
UNDO (ASSIGN)	Undoes changes in the programmer (was ASSIGN)

MOVE	Moves show data
COPY	Copies show data
CLEAR	Clears data out of the programmer
INCLUDE	Includes show data back into the programmer
UPDATE	Updates show data from the programmer
←	Backspace button (also used to exit any of the above modes)

## 4.5 Windows Select Area

The Windows area is situated on the top right of the board. It consists of five rows of buttons with six buttons in each row. The area is used to select which windows are shown on the touch screen and to configure the position and size of each of the windows.

### 4.5.1 Controlling Windows

The upper row of buttons controls the position and size of windows

MIN	Window is returned to the size and position prior to maximising
MAX	Window is sized to the whole of the window area
CLOSE	Window is closed
NEXT WIN	The next window becomes the active window
PREV WIN	The previous window becomes the active window
SIZE	Changes the position and size of the active window

### 4.5.2 Window Buttons

The first row of buttons is used to select special windows

SPARE1	Spare, can have macros assigned
SPARE2	Spare, can have macros assigned
SPARE3	Spare, can have macros assigned
SPARE4	Spare, can have macros assigned
MEDIA	Media server control
EXECUTE	Execute window – custom layout

The next row of buttons is used to select general function windows

PROG	Programmer – data used to program cues
OUTPUT	DMX output, input, movement values
SETUP	Console settings
PATCH	Patched heads
MACRO	Macros for recalling custom functions
HELP	Help information

The next row of buttons is used to select show data windows

PAGE	Selects the Page of Playbacks
------	-------------------------------

CUE STACK            Contents of a Cue Stack  
CUE                 Contents of a Cue

PLAYBACKS          View / test playbacks  
STACK STORE        Lists all Cue Stacks  
CUE STORE          Lists all Cues

The lower row of buttons is used to select head control windows

GROUP	Selects a group of heads or individual heads
INT	Controls the intensity of heads
FX (was ATTR)	Controls the FX applied to heads
POS	Controls the position of heads (i.e. pan / tilt)
COL	Controls the colour of heads
BEAM	Controls the appearance of heads (gobo, iris, shutter etc...)

#### 4.5.3 Selecting and recording complete window layouts

The console enables complete window layouts to be recorded and selected. The console incorporates several standard window layouts including Palettes and Cue Stacks.

To select a Window layout hold down CTRL and select one of the top soft buttons.

To record a Window layout first close all windows (SHIFT + CLOSE). Then open the required Windows and size them appropriately. Press RECORD and then hold down CTRL and select one of the top soft buttons.

To name the Window layout, press SET and then hold down CTRL and select one of the top soft buttons. Enter a name for the layout.

## Common Actions

The MagicQ utilises many common actions for carrying out programming functions. All the actions use similar button presses. Once you understand the action in one Window, you will understand how it is done in another Window.

We strongly recommend you make yourself familiar with these actions – they will save you valuable programming time.

### 4.6 Items

Actions in Windows can be carried out on individual items or on multiple items. For actions on a single item, use the cursor keys to move around the Window so that the cursor is over the required item.

For multiple items in a Window, move the cursor to the first item. Then press and hold the SHIFT button whilst moving the cursor to the last item. All the items will be highlighted.

In spreadsheet style Windows (e.g. Patch) pressing the touch screen or left clicking on the item with the mouse moves the cursor to the item. You can highlight multiple Window items by pressing the touch screen and moving the touch across multiple items.

In boxes style Windows (e.g. Group), pressing the touch screen or left clicking performs the function associated with the item (e.g. recalls that Group). In these Windows use SHIFT and the cursor keys to highlight multiple boxes.

### 4.7 Setting the value of items

To set the value of one or more items in a spreadsheet style window:

Move the cursor over the item (s)  
Enter a value on the keypad and press ENTER.

OR

Type in the value on the keypad  
Press the touch screen / click / ENTER over the item.

For items that have a simple value of yes or no if you do not enter a value on the keypad then the value will toggle. For items that have multiple values double click on the field for a list of values. On the touch screen select the field and then press anywhere in the Input Display (right side area underneath the main window) to bring up the list of values.

Items that are coloured orange are read only and therefore cannot be set.

### 4.8 Naming items

Press the SET button  
Press the touch screen / click / ENTER over the item to name.  
Enter the name on the external or on screen keyboards

When working in spreadsheets style windows with an external keyboard it is not necessary to press the SET button in the above sequence - you can edit the spreadsheet like any other, just by moving to the appropriate box and entering text on the keyboard.

To name multiple items highlight it is often easier to highlight the items before pressing SET. If you press SET immediately after highlighting multiple items then the console will assume that these are the items you wish to set.

You can also press SET instead of pressing ENTER in the above sequences.

#### **4.9 Moving items**

Press the MOVE button.

Press the touch screen / click / ENTER over the source item.

Press the touch screen / click / ENTER over the destination item.

To move multiple items highlight it is often easier to highlight the items before pressing MOVE. If you press MOVE immediately after highlighting multiple items then the console will assume that these are the source items and will only prompt for the destination. You can also move multiple items by pressing and holding MOVE then selecting the multiple items, releasing MOVE and then selecting the destination.

You can also press MOVE instead of pressing ENTER in the above sequences.

#### **4.10 Copying items**

Press the COPY button.

Press the touch screen / click / ENTER over the source item.

Press the touch screen / click / ENTER over the destination item.

To copy multiple items highlight it is often easier to highlight the items before pressing COPY. If you press COPY immediately after highlighting multiple items then the console will assume that these are the source items and will only prompt for the destination. You can also copy multiple items by pressing and holding COPY then selecting the multiple items, releasing COPY and then selecting the destination.

You can also press COPY instead of pressing ENTER in the above sequence.

When copying Cues or Cue Stacks the console by default does not make individual copies of the Cues - the Cue Stacks link to the same Cues. To copy unlinked (i.e. to create new Cues) then press SHIFT and COPY in the above sequence.

#### **4.11 Removing items**

Press the REMOVE button.

Press the touch screen / click / ENTER over the item to remove.

To remove multiple items highlight it is often easier to highlight the items before pressing REMOVE. If you press REMOVE immediately after highlighting multiple items then the console will assume that you wish to remove the highlighted items.

You can also press REMOVE instead of pressing ENTER in the above sequence.

#### **4.12 Recording items**

In boxes style windows it is possible to record an item (e.g. in the Group Window, to record a group):

Press the RECORD button.

Press the touch screen / click / ENTER over the item to record.

You can also press RECORD instead of pressing ENTER in the above sequence.

#### **4.13 Actions on Playbacks**

To select a Playback, press the SELECT button for the appropriate Playback.

To record a Playback, press RECORD, then press the SELECT button for the appropriate Playback.

To name a Playback press SET, then press the SELECT button for the Playback. Enter the name using the on screen keyboard or the external keyboard.

To move a Playback, press MOVE, then press the SELECT button for the source Playback and then press the SELECT button for the destination Playback.

To copy a Playback, press COPY, then press the SELECT button for the source Playback and then press the SELECT button for the destination Playback.

To include the contents of a Playback into the Programmer, press INCLUDE, then press the SELECT button for the destination Playback.

To remove a Playback, press REMOVE, then press the SELECT button for the Playback. Press the SELECT button again to confirm the remove.

## 5 Patching

### 5.1 Patching on the MagicQ

Conventional lighting consoles are often limited in the number of DMX channels they can control independently – typically 24, 48 or 96 channels. These channels typically correspond to the number of faders on the console. Some consoles offer a patching facility to allow multiple DMX channels to be patched onto one fader – but these DMX channels can then not be controlled independently.

The MagicQ console allows access to all DMX channels on all the DMX universes supported on the console. Each channel can be controlled and programmed independently giving superior flexibility.

Consequently the console does not make a distinction between DMX channels and console channels and therefore there is no need for complex patching to be carried out before the console can be used.

Each head can be allocated a head number for recall using the keypad and a name for identification. However to save time, the console will automatically allocate numbers and names according to fixture types.

### 5.2 Getting started with patching

The console supports comprehensive patching facilities for allocating dimmers and intelligent heads to DMX channels. Patching can be carried out at any time and has an immediate effect.

Press the PATCH button to open the Patch Window. The Patch Window has two possible views, VIEW HEADS and VIEW CHANS.

VIEW HEADS is used to manage heads and dimmers, such as naming, setting head numbers and gel colour.

VIEW CHANS is used to carry out operations on individual DMX channels, such as testing the channel and setting inverts.

### 5.3 Testing channels

To test channels in VIEW CHANS press the TEST CHANS soft button to enter test mode. In this mode the channel which the cursor is on is set to the level configured on the TEST CHANS encoder. Use the cursor keys to move through different channels. Test mode remains active until the TEST CHANS soft button is pressed again.

Channel testing works for both patched and unpatched channels. Note that for channels patched as LTP, the level of the Grand Master does not affect the channel level and after test is turned off the channel remains at the test level. LTP channels can be set to zero by pressing CTRL CLEAR.

You can also test channels by moving to the appropriate channel and pressing the TEST SELECT CHANS soft button. The channel will be set to the level of the Grand Master fader. Pressing TEST SELECT CHANS soft button again returns the channel to zero. You can test multiple channels by using SHIFT and the cursor keys to select multiple channels and then pressing the TEST SELECT CHANS soft button. Channels that are in test mode are highlighted in red.

Pressing the NEXT UNI or PREV UNI soft buttons moves you up or down the window to the first channel of the next or previous universe.

## 5.4 Patching a head or dimmer

The console supports a large library of heads. The console treats dimmers just like any other head - they just happen to have a single channel. Dimmers use the "Generic Dimmer" personality.

Choose the head you wish to patch by pressing the CHOOSE HEAD soft button. The Window will change to give you a list of heads. Select a head by pressing the touch screen. Alternatively scroll around the Window using the cursor keys, and press ENTER when the cursor is over the correct head.

Once you have chosen a head you will be returned to the Patch Window. Press the PATCH IT soft button to patch the head, and you will be prompted for an address to patch the head to.

Press ENTER to patch to the next free address. If you wish to patch multiple heads at fixed offsets e.g. four Martin Mac500s at DMX channels 1,21,41,61 then enter 4/20.

To patch a head at a specific address use @. For example to patch 10 dimmers at DMX address 20 key in 10@20. To patch to the 2<sup>nd</sup> universe use 10@2-20. To patch at the first free address on a universe other than the first universe use +, e.g. for the second universe use 10@+2-1

To patch more heads, just repeat the above process.

To patch a dimmer, simply press CHOOSE DIMMER rather than CHOOSE HEAD and then patch one or more dimmers as above.

In the Patch Window all the fields coloured yellow can be configured. To modify a field, first move the cursor to the field, then input the new value using the keypad and keyboard, and finally press ENTER.

In this way you can modify DMX address, head number, head name and gel for each of your patched heads.

## 5.5 Head names and numbers

Press the VIEW HEADS soft button to check the heads you have patched, and to name and number them as you wish. In the Patch Window all the yellow fields can be configured. To modify a field, first move the cursor to the field, then input the new value using the keypad and keyboard, and finally press ENTER.

Multiple head names and numbers can be set at the same time by using SHIFT and the cursor keys to select multiple items. Turning on test mode using the TEST HEAD soft button makes it easy to view each head / dimmer in turn.

By default the VIEW HEADS view is sorted by head number. If you are setting head numbers by entering each head number individually then you may find it easier if the view is sorted by DMX. Press the SORT soft button and select BY DMX. Note that the sort also affects the order in the Intensities Window, the Programmer Window and the Group Window.

### 5.5.1 Head Names

Head names are used to identify the Dimmer or Head. We recommend that you set the head name based on its location (e.g. front wash / back truss SL). It is not necessary to name intelligent heads according to their product name (e.g. Mac500) as this is already stored in the console from the personality.

### 5.5.2 Head Numbers

Head numbers are used in various displays to indicate which heads are being operated on. Head numbers can also be used for selecting heads and setting intensities directly from the keypad.

By default the console numbers in the order that they are patched starting from 1.

If you expect to be selecting heads using the keypad then we recommend you use unique head numbers for each head. The console will use unique numbers by default. You can modify head numbers manually so that they are more meaningful to your rig. Alternatively you can use one of the in-built renumber algorithms.

Pressing RENUM HEAD NOS and selecting BEST FIT causes the console to use an intelligent algorithm to allocate heads starting with numbers that you can easily recall. For example, if you patch 4 MAC500s and 4 HPEs then when you renumber using BEST FIT it will number the MAC500s from 1 to 4 and the HPEs from 11 to 14.

If you would rather work with DMX channel numbers, then press the RENUM HEAD NOS soft button and select BY DMX. This will configure the head number for all patched heads to be the DMX channel address of the head. You can then select heads and set intensities using the DMX channel numbers.

Selecting HEADS (ALL START 1) sets the head numbers so that for each head the numbers start from 1 - this is the default option. Selecting BY NAME sets the head numbers so that they use head name, gel and type to order the heads.

## 5.6 Gel name and number

For dimmers you may wish to configure the gel name or number. This makes programming easier – enabling the console to auto program cues for you.

The gel field uses gel numbers. For Lee colours enter the gel number directly (e.g. 181 for Lee 181). For Rosco colours enter the gel number preceded by dot (e.g. .14 for Rosco 14). For no colour enter 0. If you would prefer to use colour names rather than gel numbers then simply enter the colour name. The console knows about most standard colours.

## 5.7 Generating auto groups

The console automatically generates groups for each of the different heads patched onto the console – e.g. “All Dimmers”, “All Mac500”.

The console is also capable of generating groups based on gel colours and head names. Press the AUTO GROUPS soft button in the VIEW HEADS view of the Patch Window and then select Dimmers and/or Heads.

When Dimmers are selected the console will examine all dimmers patched and generate a group for each different gel colour and a group for each different head name.

When Heads is selected the console will generate a group for each different head type that has heads with a distinct head name. Thus if you have named some of your Mac500s “front” and some of them “back” it will generate a “Mac500 front” group and a “Mac500 back” group.

## 5.8 Inverting and Swapping

In VIEW HEADS you can invert the pan and tilt channels of moving heads and also swap the pan and tilt channels. Pressing ENTER in the appropriate field changes the field value.

Individual channels can also be inverted in VIEW CHANS if required.

### **5.9 Minimum and maximum levels**

You can set minimum and maximum levels for each patched channel from the VIEW CHANS view. This is useful for setting pre-heat on dimmers or for limiting output values of certain lamps where power is tight.

The minimum and maximum levels have absolute over-ride over all other playback and programming on the console. Master faders and the DBO button do not affect the minimum and maximum levels.

Minimum levels can be useful to force a minimum light level on a stage, for example during a changeover.

### **5.10 Dimmer curves**

The console supports a number of dimmer curves. The user interface to enable the user to change the dimmer curve will be made available in a future version of software.

### **5.11 Changing the DMX channels of dimmers and heads**

Dimmers and Heads can be moved to different channels as required. When they are moved all the programming and palettes associated with them also moves to the new channels.

In VIEW HEADS, simply edit the DMX field with a new address.

In VIEW CHANS, press the MOVE button, then select the channel field of the Dimmer you wish to move. Then select the channel field of the destination. Heads are moved in the same way as Dimmers – for the source channel select any of the channels of the Head.

If you try and move to a location where there are already channels patched then the console will prompt whether you wish to continue and move the already patched channels aside. If you confirm YES the already patched channels will be moved to the next free locations. If you confirm NO then no move will be performed.

Multiple Dimmers and Heads can be moved at a time using SHIFT and the cursor keys. When making a change to multiple heads the change defaults to an absolute change – thus the first head will be moved to the specified address and the next heads to the addresses immediately following. To make a relative change enter a / after the new address - i.e. to move 4 heads from 1-1 to 2-1, but keeping the relative DMX offsets between the heads, enter 2-1/. You can also specify an explicit offset to use, just like when patching e.g. 2-1/20.

### **5.12 Editing Head personality**

You can modify the personality of a Head or create a new personality in the [Head Editor](#). Choose the head you wish to edit and then press the EDIT HEAD soft button.

To quickly choose a head that you have already patched without having to go back into the Choose Head window, move the cursor to the head in the Patch Window, hold SHIFT and press CHOOSE HEAD.

To quickly edit a head that you have already patched without having to go back into the Choose Head window, move the cursor to the head in the Patch Window, hold SHIFT and press EDIT HEAD.

### **5.13 Copying dimmers and heads**

Dimmers and Heads can be copied - this has the effect of cloning the programmed Head. This is particularly useful when modifying a pre-programmed show to add extra heads or dimmers. When they are copied, all the programming associated with the copied Heads is expanded to include the new Heads.

For example, if you have a show programmed with 4 MAC500s and you want to add 4 more MAC500s, then you can clone the 4 programmed MAC500s. All the Cues, Cue Stacks, Groups and Palettes that have the original 4 MAC500s will now have the additional 4 MAC500s as well.

By cloning heads in this way you have a quick and easy approach to expanding your show. You can then programme some new Cues and Cue Stacks that use the new and old heads individually.

It is also possible to patch new heads into a show and then copy programming from other heads to the new heads. To copy programmed data from one head to another press the COPY HEAD PRG soft button in VIEW HEADS, then select the source head, followed by the destination head. All the Cues, Cue Stacks, Groups and Palettes that contain the source head will be updated to include the destination head.

### **5.14 Morphing heads**

It is possible to morph one head type into another head type. The system will copy the programming from the old head type to the new head type. The system takes into account the different pan and tilt ranges of the heads when copying pan and tilt data.

As no two heads are exactly the same, the programming will be unlikely to create exactly the same looks as with the original heads. A closer representation will be obtained by morphing a spot into a spot as opposed to a spot into a wash light.

If the new head types have more channels than the original head types then you must first move the heads so that there is enough free channels after the head to morph the head into the new head type (see [Changing the DMX channels of heads and dimmers](#)).

In the Patch Window, choose the new head type, then move the cursor to the head to change or select a block of heads using SHIFT and the cursor keys. Press the MORPH HEAD soft button and confirm that the action is what is required.

After morphing heads your groups, palettes, and cues will be updated to reflect the new head types.

### **5.15 Importing heads**

A quick way of patching heads is to import the heads from a file. This enables the patch list to be drawn up on a standard spread sheet or word processor. The console supports comma separated variable files (.csv) which can be generated from most spread sheets and word processors.

The first row of the file indicates which columns are present in the file. The next rows of the file contain the data for each head.

### **5.16 Exporting heads**

The patched heads can be exported using the same file format as used for import. This file can then be read by a standard spread sheet or word processor. Patch lists can then be printed.

### **5.17 VL5 type channels (split personalities)**

The console supports heads such as the Vari-lite® VL5™ where the head functionality is split between different non-contiguous DMX addresses.

The personality for the main channels in the head includes the extra channels. The extra channels are then patched separately and set to have their levels copied from the main channels.

For example for a VL5, patch the VL5 to the required DMX address for the main fixture. This will include a dummy dimmer channel. Then patch a Dimmer Channel for the real dimmer and set the Merge field to Copy and the From field to the channel number of the dummy dimmer channel.

You can set up multiple dimmer channels very quickly using the cursor keys to select multiple entries in the Copy From column. Use / to specify an offset. For example to copy the dummy dimmer channel from five VL5 heads at 1-1 (9 channels each) to dimmers at 2-1, use the cursors to select the five dimmers in the Copy From column and enter 1-1/9.

### **5.18 Merging with DMX input**

The console supports comprehensive merging of data from each of the six input and output universes. Any output channel can be set to output data from any received input channel.

In addition channels can be configured so that they are passed through transparently unless the console is controlling the channel from the programmer or a playback. This provides a powerful over-ride mode.

To set a channel to output data received from another channel set the Merge field to Input and the From field to the channel number you wish to get the data from.

You can easily set up a large number of channels by using SHIFT and the cursor keys to select multiple channels.

You can also set up a channel so that it outputs data from an input channel except when that channel is being controlled by a playback or the programmer. Set the Merge field to Over.

### **5.19 Customising Locate values and Default values**

MagicQ allows the user to define the Locate and Default values for each attribute of each patched heads.

The Locate values are the values that are used when the Locate button is pressed. The Default values are the values that are output when a channel is not in the programmer and no playback is controlling a channel. Note that the Setup Window option “Chans default to Locate vals” must be enabled for this mode of operation.

By default, the Locate values and Default values are taken from the personality of the patched head – these typically put the position to centre, beam open, colour white and intensity at full.

These values can be re-programmed by creating a Cue that represents the desired Locate Values and/or a Cue that represents the desired Default Values. Simply record a Cue into the Cue Store and then press the SET LOC CUE or SET DEF CUE soft buttons. The Cue is indicated as Default or Locate by a D or L after the Q number.

Only one Cue can be the Default Cue and only one Cue can be the Locate Cue – however one cue can be both the Default Cue and the Locate Cue.

It is not necessary to program all the different attributes into the Locate Cue or the Default Cue – simply program the values that you want to be different from the Locate vals in the Personality. For instance to record a default position with all heads positioned towards FOH position, simply record a Cue with the FOH position data and press the SET DEF CUE soft button.

If you wish to change the Locate Cue or the Default Cue then simply re-record the Cue. If you update Palettes used in the Cue, or modify the Cue directly from the Cue Window then you may need to reset the Cue in the Cue Store before the change takes place. Press the CLEAR DEF CUE and SET DEF CUE for the desired Cue.

## 6 Setting Dimmer levels

The levels of Dimmers are controlled from the Intensity Window. Press the INT button to open the window.

### 6.1 Using the on screen faders

This window displays a fader for each dimmer and head patched onto the console. Pressing the slider part of the fader sets the appropriate level. When a fader is moved from 0 the channel in the programmer is activated – and the fader will turn red.

The SQUARE OFF soft button enables fast programming of intensities. Using the touch screen select the channels you wish to have at full and at zero – but don't bother being exactly accurate with the level of the selection. Pressing SQUARE OFF finishes the job by setting all channels that are less than 50% to 0 whilst setting channels above 50% to full.

Use the ALL TO FULL and ALL TO ZERO buttons to change the level of all the channels.

Press SHIFT and SQUARE OFF to invert the faders - all channels less than 50% go to 100% whilst all channels above 50% go to 0%.

Press the CLEAR soft button to clear the programmer.

### 6.2 Using the encoders

A single fader or multiple faders can be controlled using the top right rotary encoder. The encoder controls the fader, which the cursor is over. Selecting a block of faders by pressing the cursor keys whilst holding the SHIFT button down enables multiple faders to be selected.

### 6.3 Using the keypad

The level of dimmers and the intensity channel of heads can be set from the keypad. Head numbers are used to reference the required dimmers and heads.

If you intend to use this method for setting intensities then you should set up the head numbers when patching. It is easy to do - the console can automatically renumber them, or they can be set to be the same as the DMX start address of the dimmer / head. See the section on [patching](#).

Keypad setting of intensities is supported regardless of which Window is currently active.

To set heads 1 to 4 to 40% key in

1 THRU 4 @ 40

To set heads 1 to 4 and heads 8 to 11 to 100% key in

1 THRU 4 + 8 THRU 11 @ FULL

To set heads 1 through 12 but not head 7 to 10% more than their current value key in

1 THRU 12 - 7 @ +10

The console supports theatre style key entry – so you can set head 1 to 40% by typing  
1 @ 4 ENTER

and you can set head 1 to 4% by typing

1 @ .4 ENTER or 1 @ 04

Note that if the "[Auto enter on keypad intensity set](#)" option is set, you do not need to press ENTER after you have entered a 2 digit level. The console knows that you are setting an intensity due to the @ key. Valid levels are 0% to 100%.

On MagicQ PC you can use > to indicate THRU and # to indicate FULL.

### 6.3.1 Setting fade times from the keypad

Fade times for intensity channels can be entered from the keypad. This can be done when setting levels, e.g. to set heads 1 to 4 at 80% with fade time of 5 seconds:

1>4@80/5

Or without changing the level

1>4@/5

To set a delay time and a fade time (e.g. delay 2 seconds, fade 5 seconds)

1>4@/2/5

Ensure that “Auto Enter on Keypad Intensity Set” is set to “No” for this to function correctly.

## 6.4 Using Selected Heads

When you use the keypad to modify heads, by default this does not modify which heads are selected. This ensures that you can be busking moving heads whilst modifying individual dimmer levels at the same time.

However, at any time you can set the levels of the intensities of the currently selected heads using the keypad. To set the selected heads to 70% key in:

@ 70

This method also supports standard key entry syntax such as + and – for relative changes.

You can change which heads are selected at any time either through the Group Window – see [Selecting Heads](#).

In the Intensities Window you can change which heads are selected by moving the cursor to a fader and pressing ENTER. You can also select/deselect heads by holding down SHIFT and selecting faders. When faders are shown with a thick stem they are selected. Holding SHIFT and pressing the fader toggles the selection of the fader.

## 6.5 Utilising gel colours in the Intensity Window

Programming time is significantly improved by making use of the gel colour facility built into the console. Assigning a colour to each dimmer is quick and easy and then enables the programming of scenes based on colours. In the Intensity Window the dimmers can be selected on a per colour basis, thus easily enabling the operator to identify the colour and position of the lamps to program into each scene.

First ensure that each Dimmer has been given a name and a gel colour. This can be carried out either from the Patch Window or from the Intensity Window.

To name a Dimmer in the Intensity Window, either:

- a) Type in the name on the external keyboard and then press the SET NAME soft button.
- b) Press SET, then type in the name on the screen keyboard. Then press the SET NAME soft button.

To set a Gel Colour in the Intensity Window, either:

- a) Type in the colour number on the keypad. Press the SET GEL soft button. Note that colour numbers are assumed to be Lee – proceed the colour with a dot for Rosco colours.
- b) Type in the colour name (or part of it) on the external keyboard and then press the SET NAME soft button.
- c) Press SET, then type in the colour name (or part of it) on the screen keyboard. Then press the SET NAME soft button.

Note, you should not press ENTER in any of the above operations as this will try and use the text or number you have entered to set the level for the fader which the cursor is over.

### 6.5.1 Programming of Dimmers using gel colours

In the Intensity Window you can filter out faders based on gel colour, head type and head name thus providing a view of only the data you are interested in at the time.

Use the top three left rotary encoders / soft buttons to page through head types and gel types. The display will show only the heads and colours that match the selection.

At any time press the VIEW ALL soft button to revert to viewing all faders regardless of head type, head name and gel colour.

Pressing the ALL TO ZERO and ALL TO FULL soft buttons only affects the faders that match the selected filter. So for example in order to set all the red lamps to full, page through the gel type till you reach RED and then press ALL TO FULL.

Remember that although you only view the gel type that you have requested there may be other gel types that have been previously activated in the programmer. Press CLEAR before starting programming a new scene.

## 6.6 Setting levels whilst running a show

The Intensities Window supports two views - the Programmer View and the Presets View. The faders in each of these views behave differently. In the Programmer View the faders control values within the

programmer whilst in the Presets View the faders act like individual preset faders. Intensity channels are generally configured to be HTP so the level of a particular channel will be a combination of the faders in the two views - the highest of the two faders.

It is important to understand the distinction - preset faders do not affect the contents of the programmer and therefore can not be used for programming Cues.

When programming a show you should always use the Programmer View. When playing back a show you may wish to use the Presets View - this has the advantage that since it is not part of the programmer, fader values are not affected by actions on the Programmer such as CLEAR. You could, for example, add in some face lighting from some profiles using faders in the Presets View which would not be affected by effects that you are busking on some moving heads.

Faders in both the Programmer and Presets Views are affected by the level of the Grand Master. They are also affected when a SWAP button is pressed - any HTP channels in the Programmer or the Presets View will be reduced to zero.

## **6.7 Viewing Intensities in the Outputs Window**

The Outputs Window includes a View for showing the intensities of all patched channels in a theatrical manner with channels and percentages. Open the Outputs Window by pressing the Out button and select the View Chans soft button.

Controlling intelligent heads

The MagicQ supports many different ways of modifying the values of attributes for moving heads - using encoders, using buttons, and using the touch screen.

In order to control intelligent heads it is necessary to be able to select which heads to use. The MagicQ console keeps track of the currently selected heads to enable it to determine which heads to apply changes to. The operator can select heads individually or can use groups to recall configurations of heads that are used frequently.

## 6.8 Selecting Heads

The console automatically generates a group for all the heads of a particular head type. In addition new groups can easily be recorded.

The Group Window has two views. VIEW GROUPS enables selection of heads using groups whilst VIEW HEADS enables individual selection of heads.

In VIEW GROUPS, pressing the touch screen for a particular group selects all the heads associated with that group. All other heads are deselected.

In VIEW HEADS, individual heads are selected by pressing the touch screen. All other heads are deselected. Use PG UP and PG DN to scroll through the heads. To select multiple heads hold SHIFT and press a head. The head will be toggled in and out of selection.

## 6.9 Using Groups

Once a group has been recorded, then pressing the touch screen for the group will make all the heads in the group selected. All other heads will be deselected. To select multiple groups press SHIFT and a group to toggle the group in and out of selection. (Note that you can change an option in the Setup Window to enable multiple groups to be selected simply without pressing SHIFT.)

When in the VIEW GROUPS view you can also use the keypad to select a group - simply enter the group number. You can use + and - to select multiple groups.

Pressing + before a group is selected adds the group to previously selected heads, i.e. the heads in the group are all selected as before, but other heads are not deselected.

For example to select groups 1 and 3 press

1 + 3 ENTER

To deselect group 4 from the selection press

- 4 ENTER

The console generates groups for each head as they are patched. In addition the console can generate [auto groups](#) based on gel colour and head name.

### 6.9.1 Recording a Group

Select the heads you want in a group in the VIEW HEADS view of the Group Window.

Change to the VIEW GROUPS view.

Press RECORD and then select the group you wish to record either by pressing the touch screen or by using the cursor keys and then pressing ENTER.

### 6.9.2 Naming a Group

When recording a group, if you key in a name before pressing the touch screen (or pressing ENTER) then the group will be named at the same time as it is recorded.

You can name a group at any time by keying in the name, pressing SET, and pressing the touch screen.

If you do not have a keyboard then press SET and select the group to name by pressing the touch screen (or using cursor keys and ENTER). A keyboard window will be displayed for you to enter the name on screen.

## 6.10 Selecting Heads using the keypad

### 6.10.1 Selecting Heads in the Group Window

When the Group Window is the active window and the view is set to View Heads, heads can be selected using the keypad. Head numbers are used to reference the required dimmers and heads.

If you intend to use this method then you should set up the head numbers when patching. It is easy to do; the console can automatically renumber them, or they can be set to be the same as the DMX start address of the dimmer / head. See the section on [patching](#).

To select heads 1 to 4 key in

1 THRU 4 ENTER

To select heads 1 to 4 and heads 8 to 11 key in

1 THRU 4 + 8 THRU 11 ENTER

To select heads 1 through 12 but not head 7 key in

1 THRU 12 - 7 ENTER

Note that on MagicQ PC you can use > to indicate THRU.

### 6.10.2 Selecting Heads in other Windows

You can select heads in other windows than the group window using the keypad by:

Entering the head numbers followed by @@, for example:

1 THRU 12 @@

Entering them on the keypad followed by @ ENTER. - this is only supported if the [Select heads on intensity set](#)" option is set. This method works by detecting @ in the keyboard input and instead of passing the input to the active Window it attempts to parse the input as setting intensities for / selecting heads.

1 THRU 12 @ ENTER

Entering

1 THRU 12 COLOUR

You can select heads in the Colour, Beam and Position windows if you set the [Select heads in Col, Beam, Pos](#) option. When set, you can select heads by entering them on the keypad followed by pressing the COLOUR, BEAM or POSITION buttons.

### **6.11 Selecting heads using the rig plan view**

Heads can be selected from a plan of the rig in the View Plan view of the Outputs window. See [creating rig plans](#).

### **6.12 Locating Heads**

The first action you are likely to want to do is to locate the heads – i.e. to put them into a starting position. Select the required heads and then press the LOCATE button.

If the heads enable DMX control of the striking of the lamp then you may need to “Lamp On” the head in order to see the beam. Select the heads and then press SHIFT LOCATE. This runs the "Lamp On" macro.

### **6.13 Modifying Attributes**

Intelligent heads have several different attributes typically including pan and tilt, colour, gobo and iris. When the MagicQ lighting console patches an intelligent head it maps the head parameters to standard attributes to enable easy access of the features of the head.

The MagicQ lighting console supports two ways to modify attributes – either using attribute types or using attribute banks. Both methods can be used interchangeably to program a show.

#### **6.13.1 Using Attribute Types**

Attribute types is a powerful way of categorising attributes. Attributes are categorised into four types – Intensity, Position, Colour and Beam. On the MagicQ there is a window for each of these attribute types. Select the required heads, then open the required window.

The window enables the control of all the attributes of that attribute type using the eight rotary encoders. In the Beam Window there are more than eight attributes to be controlled – these are accessed using multiple pages of encoders – by pressing the NEXT PAGE soft button.

For indexed attributes such as colour wheels and gobo wheels, the button associated with each encoder can be used to bump the attribute value to the next range. Pressing SHIFT and the button bumps back to the previous range.

In addition the window enables selection of palette values for the attribute type using the touch screen. When heads are recorded the system automatically generates palettes for each attribute type. You can record new palette entries, or modify existing ones as you see fit.

In the Colour Window there is a COL MIX soft button which gives access to libraries of pre-programmed colours. Pressing the COL MIX soft button toggles between the normal palette view and the colour mixing view. In the colour mixing view you can select a colour using the touch screen. The COL TYPE soft button enables the user to choose between the default colour library, the Lee colour library or the Rosco colour library.

To modify a 16bit parameter in high (i.e. 16 bit resolution), hold SHIFT and turn the appropriate encoder.

### 6.13.2 Using Attribute Banks

Attribute Banks is a traditional way to categorise attributes. The attributes are divided up into banks of two attributes each, and then can be accessed using two rotary encoders. Select the required heads and then press CTRL and the FX (was ATTR) button to open the Attribute Window.

On the MagicQ console the attribute banks are supported through the Attribute Window. In this Window the top soft buttons are used to select the attribute bank. The leftmost soft button toggles between the two possible pages of attribute banks.

Page	Bank	Attribute 1	Attribute 2	Attribute Type
1	1	Dimmer		Intensity
1	2	Shutter	Iris	Beam
1	3	Pan	Tilt	Position
1	4	Colour 1	Colour 2	Colour
1	5	Focus	Zoom	Beam
1	6	Gobo 1	Gobo 2	Beam
1	7	Rotate 1	Rotate 2	Beam
1	8	Fx 1	Fx 2	Beam
1	9	Cyan	Magenta	Colour
1	10	Yellow	Col Mix	Colour
2	1	Control 1	Control 2	Beam
2	2	Control 3	Control 4	Beam
2	3			Position
2	4	Colour 3	Colour 4	Colour
2	5	Frost 1	Frost 2	Beam
2	6	Gobo 3	Gobo 4	Beam
2	7	Rotate 3	Rotate 4	Beam
2	8	Fx 3	Fx 4	Beam
2	9	Fx 5	Fx 6	Beam
2	20	Fx 7	Fx 8	Beam

The two large rotary encoders are then used to modify attribute 1 and attribute 2 respectively. Alternatively use the touch screen to select a range value for the attribute.

For indexed attributes such as colour wheels and gobo wheels, the button associated with each encoder can be used to bump the attribute value to the next range. Pressing SHIFT and the button bumps back to the previous range.

### 6.14 Flip

Flip modifies the pan and tilt parameters of a moving head so that the beam is positioned in the same place but from the other end of its movement ranges. Select the fixtures and then press the FLIP soft button in the Position Window or the Attr Window.

## 6.15 Copy between heads

You can copy between heads using the keypad. To copy the head data, select some heads from the keypad, press COPY and then enter the destination heads. For example, to copy from heads 1 to 2 to heads 5 to 8

1 THRU 2 COPY 5 THRU 8 ENTER

Selected attributes can be copied rather than the entire head, by using SHIFT + COPY instead of COPY and setting the attribute mask.

It is not necessary to have the same number of source heads as destination heads. Each of the source heads is used in turn to copy data to the destination heads.

## 6.16 Head Macros

The console loads macros for the head from the personality file. Typical macros are "Lamp On", "Lamp Off" and "Reset" - however they are very head dependent.

The "Lamp On", "Lamp Off" and "Reset" macros can be run at any time by using the following short-cuts:

SHIFT + LOCATE	Lamp on selected heads
CTRL + LOCATE	Reset selected heads
CTRL + SHIFT + LOCATE	Lamp off selected heads

Other head macros can be accessed in the Macro Window - press the HEAD MACRO soft button. A list of the available macros is displayed. Select the macro you wish to run. Progress of the macro is shown in the Status Window.

It is also possible to lamp on or off all fixtures from the MACRO window.

## 6.17 Selecting individual Heads

When programming it is often useful to be able to control one head out of a group of heads - for instance, in order to set up its position on the stage. Alternatively you may wish to apply an effect to all the heads, such as fanning the position.

The head control buttons situated to the right of the touch screen enable the individual head to be selected quickly. Once a number of heads have been selected for programming, the head control buttons controls how changes are applied to those heads. By default changes are applied to all the selected heads.

### 6.17.1 Locate

Pressing LOCATE, locates all the selected heads. The personality data for each head specifies what happens to a head when it is located. Typically the shutter is opened, the dimmer is set to 100% and pan and tilt are set to the centre position.

Pressing SHIFT LOCATE applies the lamp on macro to heads which have a lamp on functionality.

You can locate individual attribute types by holding one of the Pos, Col, Beam or All buttons and pressing LOCATE. Only attributes of that type are located (All does Intensity only).

### 6.17.2 Single Mode

Pressing NEXT HEAD, PREV HEAD or SINGLE enters Single mode whereby only one head from the selected heads is operated on at a time. When Single mode is first entered control is given to the first selected head – i.e. the first head the user selected after no heads were selected. Note that if the heads were selected using a group then the first head will be the first head that was selected when the group was recorded. Single mode is indicated by a LED lit on the SINGLE button.

In Single mode changes made by the encoders or through selecting Palettes only affect the one head that is being controlled. The head is indicated by a \* by the head number.

Once in Single mode, the NEXT HEAD and PREV HEAD buttons are used to transfer control between the selected heads. Pressing the ALL button returns the head control area to the default mode whereby all selected heads are controlled.

In Single mode, Locate only affects the one head that is being controlled.

### 6.17.3 Odd/Even

Odd/Even mode is similar to Single mode except that instead of only a single head being controlled, half of the heads are controlled. Odd/Even mode is indicated by a LED lit on the ODD/EVEN button.

Pressing ODD/EVEN selects the odd heads. Pressing NEXT HEAD or PREV HEAD toggles between the odd and even heads. Pressing the ALL button returns the head control area to the default mode whereby all selected heads are controlled.

### 6.17.4 Highlight Mode

Highlight mode is used in conjunction with Single mode and Odd/Even mode. There are two possible modes of operation depending on the setting in the Setup Window of the "highlight defaults Col, Beam" option.

If "highlight defaults Col, Beam" is set then all the attributes of the heads that are being controlled to be set to their default values except for the Position attributes. If Single mode or Odd/Even mode is in operation then only the subset of the selected heads is highlighted.

If not set, then it causes the intensities of the selected heads to be reduced except for the one (or ones in Odd/Even mode) that are being controlled. Highlighting of the controlled head(s) makes programming of positions much easier.

When in Highlight mode the LED on the HIGHLIGHT button is lit - pressing the HIGHLIGHT button again or the ALL button returns the head control area back to the default mode.

### 6.17.5 Fan Mode

The FAN button enables a different mode of operation of the encoders whereby instead of encoder changes being applied to each selected head in a linear fashion, changes are applied in a fan. Positive

changes fan the heads apart whilst negative changes fan the heads together. Fan mode cannot be used when Single or Highlight modes are active since fanning only makes sense when more than one head is under control.

Pressing and holding the FAN button enters FAN mode temporarily. Releasing FAN the FAN button returns to the normal mode.

There are 3 types of FAN

- Asymmetric (default, as in previous s/w) – fans from centre asymmetric
- Symmetric – fans from the centre symmetric
- End – fans from the end

To change the FAN type, press SHIFT + FAN. In FAN mode the current FAN type is shown in the status display window (Fan-A, Fan-S, Fan-E).

The following short-cuts also work:

- Hold FAN + press LOCATE. Returns to default FAN type – asymmetric.
- Hold FAN + press NEXT HEAD. Chooses next FAN type.
- Hold FAN + press PREV HEAD. Chooses previous FAN type.

#### 6.17.6 All

The ALL button is used to return the head control area to the default mode whereby all heads in the current selection are controlled.

Pressing ALL when there are no heads selected causes the selected heads that were active when CLEAR was last pressed to be reselected.

Pressing SHIFT and ALL selects all the heads of the type last selected.

### 6.18 Adding in FX

To apply a FX to some heads, select the heads then from the FX Window, Group Window, or Prog Window press the ADD FX soft button. Choose the FX to apply.

You can apply multiple FX to a head, provided that the FX uses different attributes - e.g. you can mix a Pan Sine with a Tilt Sine.

Some of the FX are not specific to particular attributes of the head – these are marked with a \* – e.g. Ramp, Sine and Cosine. When one of these is selected you are prompted for which attribute you wish to apply the FX to. For instance you could program a circle using a Sine on the Pan attribute and a Cosine on the Tilt attribute. Alternatively you could just use the circle FX!

Once you have chosen a FX you are returned to the Prog Window. Use the encoders to modify the parameters of the FX such as the speed, size and spread between heads.

The Prog Window provides a Simple and an Advanced View. The Simple View enables modifications of the FX as applied to all heads. The Advanced View enables the parameters of the FX to be modified for each different head – this, for example, enables different sizes to be set for different heads.

FX can be added and removed from the Programmer window.

### 6.18.1 FX base values

By default FX are added to the current channel values - therefore it is important to ensure that the channel values are set correctly. For example, to run a circle in the centre of a MAC500s pan and tilt range, it is necessary to set both pan and tilt to the centre position (128) before adding the FX. Changing the channel values changes the point around which the FX is centred.

Similarly in order to run a 0% to 100% dimmer chase on HTP channels the channels should be set to 50% intensity and the FX added.

Channel values and FX values do not have to be recorded onto the same playback. One playback can be used to set the centre position of the FX and another to control the FX itself. The centre position can itself be part of a multi Cue Cue-Stack or a chase thus a particular FX can itself be moved around.

If you wish to have a particular playback move heads to a particular position without a FX then record both the position and a zero size FX on the playback. Recording a zero FX ensures any other playback running an FX for those heads is over-ridden.

### 6.18.2 FX add modes

It is possible to change the way that FX are added to the base values. In the FX View of the Prog Window and Cue Window there is an “add mode” field. Page right to see this option. This determines how the FX in a Cue is added to the base values. There are three choices; Normal, Plus and Minus.

- Normal is as default – i.e. a FX will apply both plus and minus of the base.
- Plus adds the FX onto the top of the current base – i.e. the level will never be less than the base.
- Minus subtracts the FX from the current base – i.e. the level will never be greater than the base.

This is quite useful for dimmer channels and colour wheels – you can use “Plus” to simply add to the base value.

### 6.18.3 FX spread (offsets over heads)

When a FX is applied to a group of heads, the spread determines how the FX is played back over all the heads. By default the spread is even (100%) – i.e. the same FX is applied to each head but offset so that each of the heads is at a different point in the FX cycle. With even spread the heads are spread evenly round the cycle.

Setting the spread to None (0) causes all of the heads to start at the same point in the cycle – i.e. they all do exactly the same thing. Choosing values between 0% and 100% enables different looks to be generated.

### 6.18.4 FX fade times

FX can be configured to fade in and out rather than snapping in and out. The fade times are configured in the View FX views of the Programmer Window and the Cue Window (use the PAGE RIGHT button to move to the appropriate columns).

### 6.18.5 Initial spreads

If you are running multiple FX from within a Cue then you may wish to select an initial spread between the different FX. Configure this from the Programmer Window and the Cue Window (use the PAGE RIGHT button to move to the appropriate columns). Both a coarse and a fine spread can be configured.

### 6.18.6 Generating user FX

It is possible to generate user FX by programming a chase and then converting it into a FX. The FX can then be applied to any head with the required attributes.

For example, to create a new movement FX, create a position chase by recording the pan and tilt values for one or more heads. Set the chase speed to the speed that you wish the FX to default to. If you wish the FX to snap (not fade) then set the chase contrast to 0%.

Convert the chase into a FX by opening the Cue Stack window and pressing SHIFT and MAKE FX. If the chase only contains 1 attribute then you will be asked whether you wish the FX to always apply to the specified attribute, or to allow it to be applied to any attribute.

If multiple heads are used in the chase then multiple heads will be generated in the FX – this enables different heads in the FX to do completely different FX. (For example, you could record a FX where 2 heads do a tilt and 2 heads do a pan)

To record a FX that can be applied to any attribute, choose 1 attribute only (e.g. dimmer) and create the chase using this attribute. When you press MAKE FX, then select the “Make FX apply to any attribute” option.

Note that FX can only control three attributes – the first three attributes programmed in the chase will be used in the FX. Use Record Remove to remove unwanted attributes from entire Cue Stack.

### 6.18.7 User FX library - storing and recalling programmed FX

FX can be recorded into a user FX library for re-use in multiple Cues when programming, or when busking live to quickly apply a complete FX over multiple heads.

The FX Window enables the storage of FX and combinations of FX that are used regularly. The FX Window is opened by pressing the FX button (formerly the ATTR button.)

Record FX into the FX Window in the normal way – set up the FX in the programmer and then press RECORD. All of the different FX currently in the programmer are stored including all of the size, speed and offset information. In addition, any base levels for the channels that are controlled by the FX are also stored.

To recall the FX simply select the heads, and then select the FX from the FX Window. FX can be named, moved and copied just like any windows items.

To edit FX you can include an FX into the programmer and then use Update.

Note that FX are actually stored as Cues – you can see them in the Cue Store – however there is no need to access them other than through the FX window.

When you program new Cues using a FX selected from the FX window, a copy of the FX is made so that you can make individual changes in the programmed Cue. Editing the FX in the FX window will not affect your programmed Cues – only new Cues programmed using the FX.

## 7 Palettes

The MagicQ supports a comprehensive palette system for easy access to your favourite looks. When intelligent heads are patched, the console automatically generates palettes for the patched heads.

There are three types of palettes corresponding to Colour, Beam and Position. Each palette supports up to 1000 different entries.

### 7.1 Using Palettes

To use a palette, select the heads you wish to apply the change to. Then open the required palette by selecting one of the Colour, Beam or Position Windows.

From within the window select a palette entry. That palette entry will be applied to all the selected heads.

The first 10 palette entries displayed in each Palette window are automatically available on the buttons above the touch screen. For playing back shows, this enables the palettes to be "bumped" using real buttons rather than the touch screen. You can use the CURSOR UP and CURSOR down buttons to adjust which palette entries are at the top of the window, hence which ones are available on the buttons.

### 7.2 Recording Palettes

To record a palette entry, select the heads you wish to apply the change to. Then open the required palette by selecting one of the Colour, Beam or Position Windows.

Modify the attributes of the heads until you are happy with them. Then record the palette entry by pressing RECORD and then selecting the palette entry in the window.

When you record a palette entry that has already been used in programming of Cues and Cue Stacks then the Cues and Cue Stacks will be updated to reflect the changes. This is useful, for example, for touring shows that play many different venues. If the Cues use positions from the Position palette, then each day it is only necessary to change the palette entries, rather than having to re-record all the Cues.

When palettes are recorded, only the attributes appropriate to the palette are recorded. So when recording to the colour palette, only colour attributes are stored. By default, the console records all the attributes appropriate to the palette, regardless of whether you have adjusted them in the programmer.

When recording palette entries, changes are only made for selected heads. The modifications are merged with the existing palette entries.

#### 7.2.1 Recording individual attributes into a Palette

You may wish only to record only certain attributes into a palette entry – e.g. only the shutter attribute into the beam palette. You can modify the way the console records palettes using masking in the Record Options window. Open the Record Options Window when recording by holding SHIFT and pressing RECORD. Alternatively press the REC OPTIONS soft button in the Programmer Window.

Press the REC INT, REC POS, REC COL, REC BEAM soft buttons to apply masking based on attribute type. Select attributes in the window to apply masking based on individual attributes. For instance to store only the shutter attribute, press the SHUTTER attribute.

In some circumstances you may wish to record other attributes into a palette – e.g. intensity into a beam palette. Simply press the appropriate buttons in the Record Options Window.

Once the Palette entry is recorded the masking options are returned to their defaults. You can lock the mask so that it is not returned to the defaults by pressing the LOCK MASK soft button in the Record Options Window.

### 7.2.2 Recording Intensity into a Palette

To record intensity into a Palette hold SHIFT and press RECORD to open the Record Options Window (as above) and select the REC INT soft button.

## 7.3 Naming Palettes

A palette can be named when it is recorded by keying in the name before selecting the palette entry to record.

A palette can be named at any time by keying in the name, pressing SET and selecting the palette entry. If you are not using an external keyboard the select the palette entry, press SET and enter the name on the on screen keyboard.

## 7.4 Updating Palettes

A palette can be updated simply be selecting some heads, applying the palette and then re-recording the palette. Only the heads that are selected when you re-record the palette will be modified in the palette - other heads recorded in the palette will not be changed.

A complete palette can be edited using Include and Update. Press Include and then select the Palette entry to include the entire palette into the programmer. The console automatically selects all the heads that are in the Palette entry. Modifications can then be made in the programmer, and when complete pressing Update stores the changes back to the Palette.

## 7.5 Copying and moving Palettes

Palette entries can be moved and copied just like any other window item.

When a palette entry is moved, programming follows the palette entry - i.e. if you have a Cue which uses a Colour palette entry, then moving that Colour palette entry, will cause the Cue to be updated to continue to reference the palette entry.

## 7.6 Removing attributes from Palettes

You can delete an entire palette entry by using REMOVE as with any window item.

To remove specific attributes from a palette entry you can use the REC REMOVE record option. This works in a similar way to the normal record mode – except that where items in the programmer are normally merged into the palette entry, they are now removed.

The MASK IPCB and MASK ATTRIB record options enable selection of which options are deleted as for normal recording of palette entries.

For example, to remove the shutter attribute from a previously recorded beam palette entry; clear the programmer, select the heads, and modify the shutter attribute only. Then press SHIFT and RECORD, and select the REC REMOVE and MASK ATTRIB, Shutter record options. Then select the palette entry.

### **7.7 Viewing / editing Palette contents**

You can view the contents of a palette entry at any time by pressing the VIEW PALETTE soft button in the Colour, Beam and Position windows. This opens the Palette View window and shows the contents of the palette entry that the cursor was over in the Colour, Beam or Position Window.

Note that the View Palette window shows the entire contents of the palette entry regardless of which heads are currently selected. You can modify the contents of the palette entry by editing the values in the spread-sheet. You can remove values, entire heads, or entire attributes from the palette entry using the REMOVE soft button.

### **7.8 Modifying Palettes in the personality**

When palettes are recorded they become part of the show data and can be used during programming of the show. In the normal mode of operation recording palettes does not affect the personality file. This ensures that changes you make for the purposes of the show do not affect future shows.

However, it is sometimes necessary to update the personality file - either because the data in the personality file is incorrect, or to add extra palettes entries to the personality. Pressing SHIFT when you select the palette entry to record, causes the changes to be copied through into the personality.

When recording through into the personality file, the console takes the first selected head and copies the data associated with the palette entry you selected into the personality file. If the palette entry is already in the personality file (i.e. there is a palette entry with the same name as the one you selected) then that palette entry is replaced. Otherwise a new palette entry is created in the file.

You can examine the personality file, by going into the Patch Window and pressing the Edit Head soft button. Then press the Select Head button to choose the personality to examine.

### **7.9 Grabbing Palettes from DMX input**

You can program palettes by capturing real DMX data from another consoles. This provides a handy way of converting show data from one console type to another, or to back up data from one console on another.

To capture real DMX data, first select the heads you are interested in. Then change to the appropriate Palette Window - Intensity, Position, Colour or Beam. Press CTRL and INCLUDE and then ENTER. This will include the DMX input data for the selected heads into the programmer. The data can then be stored into a Palette in the usual way.

You can grab all attributes of a moving head by changing to the Group window, pressing CTRL and INCLDUE, then ENTER.

## 7.10 Using Palettes with times

Palettes can be applied with a time by simply typing in a number of seconds before selecting the Palette - this is very useful for quickly setting fade times when recording Cues or for busking in effects. In addition you can use FAN mode to quickly spread different times across a number of heads.

For example, typing in 3 before selecting a position will cause a fade to the position over 3 seconds.

Entering FAN mode and then typing 3 before selecting a position causes the heads to move to the position with a spread of 3 seconds - i.e. the first head moves immediately whilst the last head takes 3 seconds.

You can set both delay and fade times in FAN mode by entering delay / fade. For example to move all your heads onto a position in turn, type 2 / 2 before selecting the position.

A short-cut can be used to perform fanned fades – in non fan mode type a time followed by \* before selecting the Palette to fan the fade across the currently selected heads.

Applying Palettes with times and fanned times can be applied to all Palette types including Beam and Colour. For example to perform a gradual fade from one colour to the next over all your colour mixing heads, select the heads, enter FAN mode and then type in 5 before selecting a colour palette entry.

You can modify the order that a fan is applied to heads by selecting the heads in the appropriate order - at any time you can invert the order using the Selection soft button in the Group Window.

Minimum fade times can be applied using the + operator, for example to perform a fade of between 2 and 6 seconds to a new position on a group of heads enter FAN mode, type 2+4 and select the new position. The first head will fade over 2 seconds whilst the last will fade over 6 seconds.

To use both minimum delay and fade times type, for example, 2+4/3+5. This gives delay times of between 2 and 6, and fade times of between 3 and 8 seconds.

Whenever a Palette is selected with a time the times are stored in the programmer. This makes it very easy to build up Cues with times. Simply select the Palettes you want with the required times and Record the Cue. The Cue will playback with the required times.

## 7.11 Making Palettes into Cue Stacks

You can copy one or more palettes from the Position, Colour or Beam windows to a Playback (use SHIFT + cursor keys to select multiple items). This enables quick generation of Cue Stacks based on your palettes.

The Cue Stack will include one Cue for every Palette selected. The Cues will contain values from the Palette for the currently selected heads. Other attributes can be added using Record Merge.

If a Cue Stack already exists on the Playback, then the extra Cues are appended to the end of the Cue Stack.

## 7.12 Selecting Palettes from the keypad

You can now select palettes from the keypad. Set the Setup Option, “Select channels in Beam, Col, Pos” to yes (default in theatre mode). To select a palette use:

COL 5 ENTER

BEAM 3 ENTER

Timed fades can be entered at the same time – e.g. to apply colour palette 5 with a time of 4 seconds spread across all the selected heads:

COL 5 / 4 \* ENTER

## 8 Programmer

The programmer is the function of the console where show data is configured for recording. The programmer takes priority over all playbacks, and channels. It can also be used during live running to override the outputs – for example, for changing the colour or gobo of intelligent heads.

The console outputs any channels that are active in the programmer at highest priority – i.e. they over-ride all other playbacks.

### 8.1 What is in the programmer?

The Prog Window enables you to determine exactly what is in the programmer and how it is configured. Press PROG to open the window. The programmer stores three types of data

Channel Levels  
Channel Times  
Channel FX

In the Prog Window there are three views, corresponding to the three types of data. Use the three top left soft buttons to select the view.

In the Channel Times and Channel View windows you have a choice of a Simple View or an Advanced View. The Simple View is sufficient for most programming – it enables modifications of fade times on a per attribute type basis and modifications of each programmed FX. The Advanced View enables fade times and FX parameters to be set up on a per channel basis.

The LED on the CLEAR button is illuminated when there is data in the programmer.

### 8.2 Clearing the programmer

To clear the Programmer press CLEAR. All channels will be deactivated and all HTP channels will be set to zero. It is possible to force all LTP channels to zero by using CTRL CLEAR.

Pressing SHIFT CLEAR clears the heads that you have currently selected. Use this to clear one or more heads without clearing all heads from the programmer.

To clear the programmer over a period of time, type a number before pressing CLEAR, e.g. Press 5 CLEAR to clear the programmer over 5 seconds.

### 8.3 Activation by Channel or by Head?

After CLEAR has been pressed, the programmer is empty - i.e. there are no channels active in the programmer. When the level of a dimmer channel or an attribute of an intelligent head is changed for the first time then it becomes active in the programmer.

For heads with multiple channels, there is a choice here as to how the other attributes of a head are affected by the activation of 1 of the head attributes.

By default, if one attribute of a head is changed then only that attribute is activated - this is referred to as "Activation by Chan". This can be modified in the Setup Window to be "Activation by Head" in which case when one attribute of a head is changed, all the attributes of the head are activated. For LTP

channels the values of the attributes in the programmer are set to the current output value. HTP channels will remain at zero.

Performing a LOCATE activates all parameters.

At any time all of the attributes of the selected heads can be forced into the programmer by opening the Programmer Window, holding SHIFT and pressing ACTIVE.

## 8.4 Recording a Cue

The basic unit of storage on the console is the Cue, which stores

Level information

Timing information

FX information

This corresponds to the information in the programmer - recording a Cue is simply a matter of transferring what is in the programmer into the Cue.

To record a Cue, first set up the look, then press RECORD and press the SELECT button of the Playback to record the Cue onto.

To name the Cue, key in the name before pressing RECORD. You can name a Cue that has already been recorded by keying in the name, pressing SET and pressing the Select button for the Playback that the Cue was recorded onto..

To test the Cue, first clear the programmer by pressing CLEAR then raise the Playback fader or press the Playback FLASH button.

When a Cue is recorded it is automatically added to the Cue Store which is a list of all Cues stored on the console. The Cue will be given a unique Cue Number (e.g. Q1). This enables the Cue to be re-used in future programming.

To view a recorded Cue, press the SELECT button for the Playback, and then press CUE to open the Cue Window.

The Cue Window is very similar to the Programmer Window - it has the same views for Levels, Timing and FX.

### 8.4.1 Levels

All active channels in the programmer are transferred into the Cue. Thus if "Activation by Head" is in use then all the attributes of activated heads will be stored.

If the channel level was set using a Palette, then that is also recorded so that the Cue can keep track of changes to the Palette. When you subsequently change the Palette the changes will be reflected in the Cue.

### 8.4.2 Timing

The timing information in the programmer is copied into the Cue. Cue timing can be set up before or after the Cue is recorded.

There are two options for timing information:

Simple: stored for each type of attribute (HTP In, HTP Out, Position, Colour, Beam)  
Advanced: stored on an individual channel basis

Timing information for the fade in and out of FX is configured in the FX view.

### 8.4.3 FX

The Cue stores FX information for each of the FX that is in the programmer.

## 8.5 Record Options

Record options can be accessed when recording by pressing SHIFT and RECORD or at any time using the REC OPTIONS soft button in the Programmer Window.

### 8.5.1 Masking

The console supports comprehensive masking facilities to enable the operator to select which attributes are recorded from the programmer into Cues.

By default there is no masking applied - all channels in the programmer are recorded into Cues. Two types of masking can be applied - masking by attribute type and masking by attribute.

Masking by attribute type enables the operator to select which of the intensity, position, colour and beam attribute types is recorded. Press the REC INT, REC POS, REC COL and REC BEAM soft buttons to select the attribute types to be recorded.

Select attributes in the Record Options Window to select to record individual attributes into the Cue.

The Status Window indicates when any masking is active. Masking is cleared once a Cue is recorded - this can be prevented by pressing the LOCK MASK soft button in the Record Options Window.

The Record Option Window displays individual attribute names based on the currently selected head so that it is easy to recognise the attributes to select. If no heads are currently selected then it uses the first active head in the programmer.

### 8.5.2 Options

The console supports several additional options for recording Cues. These include recording all the channels from heads regardless of whether they are active in the programmer and recording only heads that are currently selected. Press the REC OPTIONS soft button and select an option.

Record options return to the defaults once a Cue is recorded.

## 8.6 Removing channels

Individual channels, times, FX can be removed from the programmer at any time from the Prog Window. Select the item (s) with the cursor that you wish to remove from the programmer and then press the REMOVE soft button.

For example, to remove the iris attributes for all heads in the programmer:

Select VIEW LEVELS in the Prog View.

Select the entire Iris column (move to the top, hold SHIFT and press END)

Press the REMOVE ATTR soft button.

To remove, all of the attributes of MAC500 head numbers 2 and 3 from the programmer.

Select VIEW LEVELS in the Prog View.

Move the cursor to the Head Name column.

Select MAC500s 2 and 3 (move to the row for number 2, hold SHIFT, move to row for number 3)

Press the REMOVE HEAD soft button.

To remove, the FX for head number 2.

Select VIEW LEVELS in the Prog View.

Select ADV VIEW.

Move the cursor to the Head Name column for Mac number 2.

Press the REMOVE HEAD FX soft button.

## 8.7 Blind programming

A show can be programmed without affecting the state of the outputs using blind programming mode. In this mode the programmer will operate as normal (with the current levels being displayed in the Prog Window) but the contents of the programmer will not be output.

Enter and exit blind mode by pressing the BLIND button. The button illuminates to indicate blind mode is active and BLIND is indicated in the status display.

Blind mode is also useful during playback for busking in FX. For example you might wish to set up a FX on some moving heads using blind mode – configuring the speed and size before you make it live.

You can enter and exit blind mode with times. For example, press 10 BLIND to enter blind mode over 10 seconds.

## 8.8 Including Cues into the Programmer

A programmed Cue can be included back into the Programmer so that the information can be used to program further Cues. When a Cue is included all the level, timing and FX information is loaded. The only exception is if the Programmer already contains FX information for the heads - in this case the FX information from the Cue is ignored.

Cues can be included directly from Playbacks - the current Cue in the Cue Stack is included. Cues can also be included from the Cue Stack, Cue and Cue Store Windows.

Including of Cues is an easy way to edit Cues. You can also use the Record Options to specify that only part of the Cue should be included into the programmer – for example only selected heads or only certain attributes. Press SHIFT and INCLUDE to get the options.

#### 8.8.1 Including Cues at a specified level

By default Include loads the Cue into the programmer at 100%. It is possible to modify this action using the keypad to use selected levels.

To include a Playback or Cue at a particular level (e.g. 40%), press INCLUDE, type @ 40 and select the Playback or Cue to include.

To include a playback at its current level press INCLUDE, type @ and press the Select button of the playback.

### 8.9 ***Editing Cues***

Cues can be edited using INCLUDE and UPDATE.

First, clear the Programmer, then include the required Cue back into the Programmer. Modify the required values in the Programmer and then use Update to re-record the Cue.

You can include multiple Cues into the programmer. When you press UPDATE, the last Cue that you included will be modified.

#### ***8.10 Updating a Cue with the contents of the programmer.***

You can quickly and easily merge the contents of the programmer into current Cue on a Playback by holding the SELECT button for the playback and pressing RECORD.

### 8.11 ***Making changes to multiple Cues***

Changes can be made to multiple Cues using the REC MERGE and REC REMOVE record options to specify a change in the programmer which is then merged with or removed from a number of Cues.

For example, to remove all the pan and tilt information for a group of heads from all the Cues in a Cue Stack on a particular playback.

Clear the programmer.

Select the heads and modify the pan and tilt attributes.

Open the Cue Stack Window and select the playback with the Cue Stack to modify.

In the Cue Window, use cursor keys to select all the Cues (PG LEFT, HOME, SHIFT+END).

Press and hold RECORD and select REC REMOVE record option.

Press ENTER.

### 8.12 ***Snapshot***

The Snapshot function enables the complete current output to be loaded into the programmer and hence recorded into a Cue. This function takes the Cues running on all active playbacks and includes them into the programmer based on the level of the fader. Both channel information and FX information is included into the programmer.

To snapshot the current output, open the Programmer Window and press the Snapshot soft button.

## 9 Cue Stacks

The console stores sequence of Cues as Cue Stacks. Cue Stacks keep track of the order of the cues and the options for how they are played back. A Cue Stack may have only one Cue associated with it or may have a whole list of Cues.

When you record a Cue onto a Playback, the console automatically generates a Cue Stack. The console adds the Cue Stack to the Stack Store. The Stack Store is a list of all Cue Stacks stored on the console. The Cue Stack will be given a unique Cue Stack Number (e.g. CS1). This enables the Cue Stack to be re-used in future programming.

If a Playback already has a Cue Stack stored on it, then by default the new Cue will be added to the end of the Cue Stack. However if you key in a Cue Id before pressing RECORD then the Cue will be inserted into the Cue Stack in the appropriate place.

To view a Cue Stack, press the SELECT button of the Playback and then CUE STACK to open the Cue Stack Window.

### 9.1 Cue Stack Window

The Cue Stack Window shows details of all the Cues in the Cue Stack including their names, numbers and timing information. The fields can be edited in a similar way to the Prog Window and Patch Windows.

The status field indicates the current status of the Cue in the Cue Stack. If the Cue is active (i.e. it is in the process of execution) then the field indicates a % complete and the entire cue is coloured red.

Each Cue within a Cue Stack has a Cue Id (e.g. 1.0). This value is specific to the Cue Stack and is used for tying up Cues with a script in theatre style playback. It is distinct from the Cue Number (e.g. Q1) used to identify the Cue in the Cue Store.

Each Cue also has some text associated with it. This text enables easy recognition of the contents of the Cue when the Cue Stack is played back. This text is displayed above the main Playbacks. It can also be displayed on the displays above the Wing Playbacks.

### 9.2 Chase timing

When you record more than one Cue onto a Cue Stack, the Cue Stack behaviour kicks in to control the transition from one Cue to another. By default the Cue Stack operates like a chase - i.e. each Cue is executed in turn, with timing being handled by a Chase Speed for the whole Cue Stack.

The timing mode can be changed, so that the Cues play back in a theatre style using the GO / STOP buttons, by pressing the CUE TIMING and CHASE TIMING soft buttons in the Cue Stack View Options Window to modify the timing mode.

## 9.3 Cue Timing

When using Cue Timing, the timing of each cue is determined by individual Wait, Delay and Fade times for each Cue in the Cue Stack. The MagicQ can execute multiple Cues at one time - for example a Cue Stack could have one Cue that fades in MAC500s in green whilst another Cue fades in HPEs in red.

The Wait time affects when execution of the Cue is started. The Delay and Fade times affect how each individual Cue is executed. The Wait time can be set to "Follow" - in this case the Cue is executed when the last Cue finishes - i.e. Cues are executed sequentially.

Each Cue has a Next Cue - by default this is set up to be the following Cue in the Cue Stack. You can change the Next Cue to be any of the Cues in the Cue Stack. This enables loops and sequences to be set up.

The Next Cue for the last Cue in the Cue Stack defaults to being the first Cue in the Cue Stack.

### 9.3.1 Cue Timing Example

To illustrate the above Cue Timing consider a Cue Stack with two Cues. When the Cue Stack starts executing it executes the first Cue using its Delay and Fade times.

As soon as the first Cue has been started (regardless of whether the first Cue is in a Delay, Fade or Complete stage) the next Cue in the Cue Stack will be examined to determine its Wait time.

If the Wait time on the next Cue is set to "Follow" then the Cue Stack will wait until the first Cue has completely finished fading (i.e. all channels have reached their final values) before starting the next Cue.

If the Wait time on the next Cue is set to a time then the Cue Stack waits that time before executing the next Cue. This time is completely independent of the first cue – the first cue may still be in Delay or Fade and will continue until the Fade completes.

If the Halt field on the next Cue is set, then the Cue Stack waits for Go to be pressed before starting the next Cue – otherwise it executes the next Cue using its Fade and Delay time.

### 9.3.2 Cue Delay and Fade times

The Delay and Fade times shown in the Cue Stack Window are properties of the Cue whilst the Wait time is a property of the Cue Stack. Modifying the Delay and Fade times of the Cue may affect other Cue Stacks that use the Cue.

The Delay and Fade time fields show the maximum delay and fade times used by any channel within the Cue – so giving a summary of the maximum delay and fade of the Cue. To view the actual times of the Cue move the cursor to the Delay or Fade field and press the View Cue soft button. This opens the Cue Window for the selected Cue, automatically showing the Cue Times.

Delay and fade times can be entered directly in the Cue Stack Window – note however that this will set the times for all attributes. If you wish to change just the times for Position, Beam or Colour then these should be set up in the Cue Window, Simple View for general times or Cue Window, Advanced View for channel specific times.

Split intensity in/out times can be entered into the Cue Stack Window in the Delay and Fade fields using /. For example, 2/3 entered in the Fade field will produce an in fade of 2 seconds and an out fade of 3

seconds. Only intensities times are affected – Beam, Colour and Position times remain at their current values.

When executing Cues, MagicQ will primarily use the specific delay and fade times entered in the Advanced View, of the Cue Window. If no times are specified, then the overall times used in the Simple View will be used. Times can be added in the Advanced View using the keypad and can be removed using the REMOVE button.

In the Advanced View, the times shown are fade times, except where delay times have been set up, then times are shown as delay/fade.

## 9.4 Tracking

By default the MagicQ works in a similar way to most traditional lighting consoles, in that what is in the programmer is recorded into the Cue. This is a "no nonsense" mode where you get what you expect recorded into your Cues.

If you program just a FX chase on pan and tilt into a Cue, then that is what you get. If you program a complete look for a head including all the attributes, then that is what you get. Looking at a Cue in the Cue Window gives you the full picture.

In a Cue Stack, you can choose for each Cue whether the Playback continues to control LTP channels used earlier in the Cue Stack but not stored in the current Cue.

However, some other consoles utilise a tracking mode to reduce show storage whereby only the changes made since the last Cue was recorded are stored into a Cue. This is often very confusing, since Cue Stacks often do not playback as they were programmed. Busking live shows can be particularly difficult, as you are never quite sure what is going to happen.

The MagicQ has a significant amount of in-built memory and a multi Gigabyte disk, so show size is not a major concern. The MagicQ also has powerful editing modes that enable changes to be made to multiple Cues simultaneously – thus overcoming any benefits tracking mode might have for storing Cues in separate parts.

The MagicQ supports a tracking mode, which can be turned on through View Settings in the Setup Window. We recommend that all but "die hard" tracking mode users utilise the console in its default, "non tracking" mode.

### 9.4.1 Tracking on the MagicQ

Tracking mode is turned on and off through the View Settings view in the Setup Window. Tracking mode determines how Cues are recorded. It does not affect how they are played back.

When tracking mode is off, then the entire contents of the programmer is recorded into Cues regardless of whether attributes have been change since the last Cue was recorded.

When tracking mode is on, then only attributes that have been modified since the Cue was recorded are stored into the new Cue. Attributes are determined as modified if their value had been changed using an encoder, using keypad entry, using a range button, using a palette or by a locate fixture. Note that modifying an attribute to a new value and then returning it to its old value counts as modified.

Whilst in tracking mode it is possible to force a record of the whole of the programmer by selecting the ENTIRE STATE record option. Record options are configured by pressing SHIFT and RECORD; whereupon the Record Options window is opened. Pressing any Window select button hides the display option and returns to the appropriate Window.

As a Cue Stack is executed, it keeps track of channels that have been used in previous Cues but are not used in the current Cue. How these channels are handled depends on the following settings on each Cue in the Cue Stack – there are three options.

Zero old HTP (defaults No in tracking mode)  
Zero old FX (defaults No in tracking mode)  
Rel unused chans (defaults No)

So, to get a Cue Stack recorded in tracking mode to maintain state during playback, ensure that all the Cue Stack steps have "Zero old HTP" and "Zero old FX" set to "No".

In addition there is an option on the Cue Stack that affects how tracking works for jumps and going backwards up the Cue Stack. If "maintain state on jumps" is set, then the console recalculates the entire state of the Cue Stack when you jump to a new Cue using "Goto Cue" or if you press the Pause button to go backwards up the Cue Stack.

#### 9.4.2 Mark Cues

Mark Cues are special cues that are used to pre-load LTP values before the following Cue is executed thus ensuring that, for instance, moving heads are in the correct position before the Cue executes.

The Mark Cue only affects LTP values for heads controlled by the Cue Stack which are currently at zero intensity. If these heads are used in the next Cue then their value will be faded to the value of the next Cue. By default the fade is set to 3 seconds but this can be modified as required.

The Mark Cue executes as soon as the previous Cue has completed execution.

In the Cue Stack Window press the Mark Cue soft button insert a Mark Cue before the Cue which the cursor is currently on. Alternatively enter a Cue Id and press Mark Cue to insert a mark before the specified Cue Id.

An entire Cue Stack can be configured to automatically perform the function of marking all Cues - set the Move When Dark option in View Options in the Cue Stack Options.

### 9.5 The Cue Store and Cue Stack Store

The console stores Cues and Cue Stacks in the Cue Store and Cue Stack Store respectively. Since you can program Cues and Cue Stacks directly onto playbacks, it is possible to program complete shows without referring to the Cue Store or the Cue Stack Store.

However, sometimes you may wish to build up a library of Cues or Cue Stacks that are not assigned to playbacks. You might then assign them to playbacks later, e.g. during a technical rehearsal.

To record a Cue into the Cue Store simply set up the required look in the programmer, open the Cue Store Window, press RECORD and press an empty Cue in the Cue Store Window.

To record a Cue into a Cue Stack in the Cue Stack Store Window set up the look as above, open the Cue Store Window, press RECORD and press the Cue Stack you wish to record the Cue into. If the Cue stack is empty then a new Cue Stack will be generated. Otherwise the Cue will be added to the existing Cue Stack, either at the specified Cue Id, or at the end of the Cue Stack.

You can test programmed Cues and Cue Stacks in the Cue Store and Cue Stack Store by pressing the appropriate Cue or Cue Stack. The console searches for an unused playback (from the last playback down) to test the Cue on. Pressing the Cue or Cue Stack again removes the Cue or Cue Stack from the playback.

You can restart a Cue or Cue Stack that is being tested by pressing the "Retest" soft button. Holding CTRL and selecting a Cue or Cue Stack also restarts the Cue / Cue Stack.

You can view the contents of a programmed Cue by moving the cursor to the required Cue in the Cue Store Window and pressing the View Cue soft button. This opens the Cue Window locked to the specified Cue. Pressing the Unlock Cue button returns the Cue Window to monitoring the current Cue on the currently selected playback.

You can view the contents of a programmed Cue Stack by moving the cursor to the required Cue Stack in the Cue Stack Store Window and pressing the View Stack soft button. This opens the Cue Stack Window locked to the specified Cue Stack. Pressing the Unlock Stack button returns the Cue Stack Window to monitoring the Cue Stack on the currently selected playback.

## **9.6 Assigning Cues and Cue Stacks**

Cues and Cue Stacks can be assigned to Playbacks at any time.

To assign a Cue, open the Cue Store Window, press the MOVE button, select a Cue, and then select a playback to assign the Cue to. You can assign to real playbacks or to playbacks in the Playbacks Window. You can assign to a specific Cue Id in a Cue Stack on a playback, by keying in a Cue Id before you select the playback.

To assign a Cue Stack, open the Cue Stack Store Window, press the MOVE button, select a Cue Stack, and then select an empty playback to assign the Cue to. You can assign to real playbacks or to playbacks in the Playbacks Window.

Multiple Cues and Cue Stacks can be assigned at a time, by using SHIFT and the cursor keys to select multiple Cues and Cue Stacks in the appropriate window.

## **9.7 Copying and Moving Cues**

Cues can be copied and moved within a Cue stack using the standard move and copy procedures. For example, to move a cue, press COPY, select the source, then select the destination. To copy multiple cues, press and hold COPY, select multiple entries, release COPY and select the destination.

When copying or moving within a Cue Stack, Cues are moved or copied before the destination Cue that you select. To copy or move onto the end of the Stack select "End" as the destination.

Cues can be copied onto other Cue Stacks that are assigned to playbacks. Select the Cues in the Cue Stack window and then select a playback fader as the destination.

By default when copying Cues, the console does not create new cues - it simply makes another link to the existing Cue. To force the console to create a new cue press SHIFT and COPY.

## 9.8 Cue Stack Defaults

The default operation of Cue Stacks can be modified in the Defaults view of the Cue Stack Window.

Defaults can be configured for all of the Cue Stack options including operation of the faders and buttons, chase defaults and the defaults for each Cue Stack step.

## 9.9 Cue Stack Macros

Cue Stack macros enable control over other Cue Stacks from within Cue Stacks such as activation, release, go, stop, and setting level of other Cue Stacks. Macros are typed into the Macro field in the Cue Stack window (scroll to the right). Macros can affect multiple Cue Stacks on different Playbacks enabling complete shows to be driven from one master Cue Stack.

Cue Stack macros take the following format:

A <Playback no>	Activate playback
R <Playback no>	Release playback
T <Playback no>	Test playback (activate with level 100%)
U <Playback no>	Un-test playback (release with level 0%)
G <Playback no>	Go on playback
S <Playback no>	Stop playback
C <Playback no>	Choose playback
L <Level>	Set level of current playback
M <Level>	Set level of the playback that is running the macro
J <Cue Id>	Jump to Cue Id on current playback
P <Page no>	Change page
V <view no>	Open view (window layout)

Playbacks can be the master playbacks 1 to 10 or the wing playbacks 1-1 to 1-24, 2-1 to 2-24 etc... Playbacks can be playbacks with faders or virtual playbacks (playbacks on non fitted wings). Multiple playbacks can be selected using + and THRU.

For example to activate playback 18 on wing 1,

A1-18

To press GO on playbacks 3 to 5,

G3THRU5

Multiple commands can be put in a Cue Stack macro, e.g. to set the level of playback 6 to 60%

C6L60

## 10 Playback

The console supports 10 main playbacks, situated immediately below the touch screen. In addition the console supports up to 192 additional playbacks available on up to 8 expansion wings.

All playbacks have a fader, a FLASH button and a SELECT button.

The 10 main playbacks also have GO and STOP buttons for control of Cue Stacks.

Note that the lower bank of playbacks on each expansion wing have GO buttons only. Cue Stacks on Playbacks without GO or STOP buttons can be controlled using the GO and STOP buttons in the manual section.

### **10.1 Playback Display**

The area above each of the main playbacks on the touch screen is used to provide information about the status of the playback. This includes the name of the Cue Stack that is loaded on the playback, the current Cue and the next Cue. The status of the Cue is shown as a percentage along with an indication of whether the Cue is running or halted.

The LCD screen above each of the Playbacks on the expansion wings displays the name of the Cue Stack.

### **10.2 Activating and Releasing Playbacks**

Playbacks are activated and released by pressing the associated buttons and raising the associated faders depending on the options of the Cue Stack. Once a playback is activated it affects the output of the console until it is released.

By default the Cue Stack on a playback is activated when the fader is raised above zero and released when it is returned to zero. Similarly it is activated when a flash button is pressed and then deactivated when the button is released.

However the Cue Stack options can be configured so that the flash buttons or the faders do not affect activation or deactivation. In this case the Playback can be activated by pressing the GO button. It can be released by making the playback the current playback and then pressing the RELEASE button.

The Cue Stack can also be configured so that it does not reset to the first step when it is released.

A Cue Stack can be set so that pressing the FLASH button, activates and releases the playback on alternate presses. Set the "Flash Button toggles" option.

A release time can be set for the Cue Stack in the Cue Stack options, so that when released the levels fade out over a specified time.

### **10.3 Fader control**

By default the playback fader controls the level of any HTP channels recorded into the current Cue on the Cue Stack. If the "Fader controls HTP chans" option is set to "No" then the fader will no longer control the HTP channels – the Playback will automatically be always set to 100% level.

The Cue Stack options can be configured so that the fader also controls LTP channels ("Fader controls LTP chans" option). This is useful for example, to set up a fader to perform a "fly away" at the end of a song. As the fader is moved up the LTP channels are changed from their current values to the values recorded in the Cue.

MagicQ supports an additional option “All chans controlled LTP”. This option allows the Playback when it is the last activated, to consider all channels to be LTP. The value of HTP channels controlled by the Playback is the value output, regardless of the HTP level of other Playbacks. This allows soloing of Intensities.

The Cue Stack can also be configured so that the fader controls the size and/or speed of any FX recorded in the current Cue. Thus, for example, you can set up one fader to control a pan swing and another to control a tilt swing. Moving the faders to half gets a small circle whilst moving to full gets a big circle. Varying the faders enables generation of ellipses.

## 10.4 Playback Buttons

Each of the buttons illuminates to indicate its current state:

FLASH	Green	Add
	Red	Swap
	Green flash	Add - playback held over
	Red flash	Swap - playback held over
GO	Green	Cue Stack is running
STOP	Red	Cue Stack is halted
SELECT	Blue	Playback is selected

When a Cue Stack is halted, pressing STOP fades backwards through the stack.

### 10.4.1 Grand Master & Sub Master

To the left of the 10 playbacks are two master faders - a Grand Master which controls the overall HTP output level of the console, and a Sub Master which controls the HTP output level of the playbacks. In addition the Sub Master can be [configured](#) to control the level of the FLASH buttons.

Both the Grand Master and the Sub Master have FLASH buttons which respectively bump the overall HTP output level, and the HTP output level of the playbacks to full.

LTP channels are not affected by the master faders.

### 10.4.2 Dead Black Out (DBO)

Above the Grand Master there is a DBO button. Pressing this button causes all HTP values to be set to zero, thus generating a black out. Releasing the button causes the original HTP levels to be restored. LTP channels are not affected by the DBO button.

### 10.4.3 Add / Swap

Above the Grand Master there is an ADD / SWAP button which controls the function of the playback FLASH buttons. When set to ADD, pressing a FLASH button causes the playback to be added to the

output. When set to SWAP, pressing a FLASH button again causes the playback to be added to the output, but all other playbacks are removed from the output.

Each FLASH button has an LED which is lit green for ADD and red for SWAP.

The ADD / SWAP functionality only affects HTP channels on the playbacks - LTP channels are not affected by the FLASH buttons. The level of the playback is determined by the master faders – see [configuring the masters](#).

Cue Stacks can be set to always swap. Open the Cue Stack window and press the SELECT button with the playback. In the VIEW OPTIONS view set the "Flash Button Swaps" option to YES.

#### 10.4.4 Page Select

Above the Sub Master are NEXT PAGE and a PREV PAGE buttons. These control which playback page is active, and hence which Cue Stacks the physical playback faders and buttons control.

The current page number and name is displayed in the status window on the touch screen. The current page can also be changed from the Page Window by selecting a new page.

Changing the current page whilst playbacks are active does not affect the output of these playbacks - the playbacks are "held over" until the playback is released.

#### 10.4.5 Current Playback

The current playback is the one that has its SELECT button illuminated. The current playback is used by the Cue and Cue Stack windows to determine the Cue and Cue Stack to view / modify.

You can change the current playback at any time by pressing the SELECT button for the playback you want to make the current playback

Sometimes you may wish that the currently selected fader changes to follow the last fader that was raised. This behaviour can be enabled from the Setup Window by setting the "Current Playback follows last touched" option to YES.

Press the SELECT button of a Playback twice in quick succession to select the Playback and automatically open the Cue Stack Window so that you can view / change the contents of the Cue Stack.

Press the SELECT button of a Playback three times in quick succession to select the Playback and automatically open the Cue Stack Window in the Options View.

#### 10.4.6 Manual Control

To the right of the 10 playbacks is the manual control section, consisting of a Manual Fader, four buttons (STOP, GO, FWD, BKWD) and an extra large GO button below the fader. This section controls the current playback – that is the playback whose SELECT button is illuminated.

Pressing the SELECT button associated with a playback causes that playback to become the current playback and hence to be controlled by the manual section.

When a playback is controlled by the manual section, the playbacks fader and buttons continue to function as normal so that the HTP level can be set using the fader and the playback can be bumped

using the FLASH button. The manual section simply provides extra control features above those available on each of the playbacks.

The GO and STOP buttons in the manual section have the same function as the GO and STOP buttons on each playback. The FWD and BKWD buttons move through the Cue stack without fading. The extra large GO button below the Manual Fader is designed for theatre style playback and has the same function as the GO button on each playback.

The Manual Fader is unlike all the other faders in that it controls the progress of the current CUE rather than the HTP level of the Cue Stack. This enables a Cue to be manually faded, the level of the Manual Fader representing the % of the fade that is complete - from 0% to 100%.

The Manual Fader enables you to in a Cue Stack. To start a manual cross-fade, hold the SELECT button for the playback and move the cross-fader. The display window will show "pickup" until the cross-fader level matches the current position in the fade - it will then change to "manual". You can also start a manual cross-fade on the currently selected playback by holding SHIFT and moving the cross-fader.

As the fader reaches the limits the Cue Stack moves to the next Cue.

#### 10.4.7 Manual Split Cross-fade

Two faders may be assigned as theatre style split cross-fade masters.

When enabled from the Setup Window, playbacks faders 9 and 10 become Xfade Masters for manual Fade In and Fade Out. Pressing the Pause button on either playback 9 or 10 brings the current playback under manual control.

The two faders can then be used to fade in each new Cue with separate control for fade in and fade out. Pressing the Go button on either Playback 9 or 10 returns the current playback to normal Cue execution. When enabled, playbacks faders 9 and 10 can not be used as normal playbacks.

#### 10.4.8 Rate sub-master

It is possible in the Setup Window to set the function of manual cross-fade fader to be a rate sub-master to control the execution rate of the current playback, or the exution rate of all playbacks. The rate is shown in the bottom right of the status window from 0% to infinity. The fader should be set to 50% for normal execution rate.

### 10.5 Playbacks Window

The Playbacks Window enables management of all 202 playbacks regardless of how many physical wings are attached. This ensures that shows that will be run on consoles with wings can be programmed on a PC with no wings. It also provides an ideal way of expanding your show control by using virtual playbacks.

The Playbacks Window displays a button for each of the 202 playbacks - starting with the 10 main playbacks and then with 8 wings each with 24 playbacks.

The top right encoder is used to select which Page of playbacks is displayed. This is completely separate from the Page used for the physical playbacks. Thus you can have the physical playbacks set to one page whilst you view and modify playbacks on a different page.

Cues can be recorded onto any of the playbacks in the same way as they are recorded onto a real playback. After pressing RECORD, instead of selecting a playback SELECT button, just press the appropriate button in the Playbacks Window.

#### 10.5.1 Testing playbacks

Any playback can be tested, by pressing the appropriate button in the Playbacks Window. This has the same effect as raising the physical fader from zero to full. Pressing the button again sets the fader back to zero. We will refer to this as a virtual playback.

You can use physical playbacks and virtual playbacks simultaneously - however if you activate a virtual playback for an active physical playback then the result will depend on whether the physical playback and the virtual playback are on the same page. If they are, then the effect will be that the playback will be activated and set to the highest level of the physical playback and the virtual playback. If not, then the physical playback will not be affected and the virtual playback will be ignored. This is because only one Cue Stack can be run on a playback.

Use the View Faders soft button to change the view in the Playbacks Window into faders rather than buttons. Faders can then be moved up and down using the touch screen / mouse. This enables full control of virtual playbacks. The GO, PAUSE and RELEASE soft buttons enable immediate control of virtual playbacks.

You can select a virtual playback as the currently selected playback by pressing the SELECT button and then pressing the required virtual playback in the Playbacks Window. This enables the Cue Stack from the virtual playback to be controlled, including the modification of Cues and Cue Stack parameters.

#### 10.5.2 Naming playbacks

Playbacks can be named in the Playbacks Window as per naming of any Windows item.

#### 10.5.3 Copying and moving playbacks

Playbacks can be moved and copied in the Playbacks Window just like any Window item. You can also change the Playback Window page between selecting the source and destination, so that you can copy or move between pages.

When a Playback is copied to another Playback, the Cue Stack on the source playback is copied (i.e. a new Cue Stack is generated) to the destination Playback. By default, the Cues that make up the Cue Stack are not copied - both Cue Stacks reference the same Cues. This means, for example, that you can generate several copies of a chase, each with the same Cues but with different chase speeds.

You can force an unlinked copy of Cue Stacks by holding SHIFT down when you press the COPY button. This forces both the Cue Stack and its Cues to be copied.

#### 10.5.4 Removing playbacks

Playbacks can be removed in the Playbacks Window as per removing of any Windows item.

### 10.6 Wing Playbacks Pages

Each wing supports 24 playbacks divided into two rows of 12 playbacks. Each row of playbacks has separate NEXT PAGE and PREV PAGE buttons.

This is a very powerful feature as it allows the playbacks to be split into separate sections without forcing all the playbacks to be on the same page.

This provides significant flexibility to how shows are played back – for example one section of a wing can be used to control par lamps whilst another could be used to control intelligent heads. Changing the Page of the par lamps would not change the Page of the heads.

By default the page buttons on the main section affect all playbacks whilst the buttons on each wing row only affect that row. If you plan to operate a wing section separately then you can avoid the main page buttons affecting that wing section. In the Setup Window, select VIEW SYSTEM, VIEW WINGS.

For each wing section you can specify which page buttons the section is tied to. To operate a section independently of any other page buttons set the tie to be itself. For example, to operate the upper section of Wing 1 independently set the upper bank tie to Wing 1 upper.

You can also tie multiple wing banks together to use one set of page buttons. Thus if you want both sections of a wing to operate off 1 set of buttons, then you can configure the ties to do this.

When any NEXT PAGE or PREV PAGE buttons are pressed the LCD displays temporarily change to indicate the current page number.

### 10.7 Default Cue Stacks

Cue Stacks can be made to appear on all pages of a Playback. To use this feature, record a Cue Stack on Page 1 and then in the Playbacks Window set "Default Cue Stack" to "On" for the selected Playback.

The Cue Stack on Page 1 then appears on any Pages which do not have a Cue Stack assigned.

### 10.8 Group Masters

Playback faders can be used to control groups of channels – you can assign a fader to be a master for intensities, FX size or FX speed for a specified set of heads.

To make a Group Master you record a single Cue onto a Playback that contains the attributes that you wish to control - for example, to make a Group Intensity Master:

Record a cue with the channels that you wish to control - the level of the channels can be any level as long as the channel is in the programmer. Then set the Cue Stack option "Fader is an Intensity Master". Activate the playback (press GO or raise the fader) and now it acts as a Group Intensity Master. Press RELEASE to stop the master having any effect.

Group Masters are activated and released in the same way as normal Cue Stacks – you may wish to change the Cue Stack options so that the Group Masters are not activated and released on fader changes and Flash button presses.

To make a FX size master for pan movement, record a cue with only the pan attribute in the programmer for the heads you wish to control. Then set the Cue Stack option "Fader is a Size Master". Activate the playback and now it acts as a Group Master for pan movement.

When editing the channels in a Group Masters you should ensure that the fader is released before you make the edit.

You can set-up multiple Group Masters – however you should only have one Group Master of each type to control each head – otherwise there is a conflict. You can have one of each of the types - Intensity Master, FX Size and FX Speed masters for the same head.

Note that the channel levels, times, and FX information in the Cue that is used as the Group Master are ignored and hence do not affect the output in any way.

### **10.9 Playback Stomping**

There is a Playback Stomping option in the Setup Window, View Settings. With this option enabled playbacks that have been fully overridden by other playbacks will be automatically released (stomped).

This is useful in some environments such as night-clubs where the operator wishes to continually play back new functions without having to turn off the older functions.

There is a choice of Stomping; LTP – or both LTP and HTP.

When set to just LTP then playbacks that contain HTP channels are never released (stomped) as they may still be affecting the output. When set to LTP and HTP then playbacks are stomped if all of the LTP channels have been overridden by another playback and the HTP channels are at the same or higher level in another playback.

### **10.10 Playback priority**

It is possible to set a playback to maximum priority using the Cue Stack option “Highest Playback priority”. When set the, the Cue Stack takes priority over all other playbacks and the programmer. LTP channels under control of the playback are not affected by other playbacks or the programmer. HTP channels continue to operate as normal except that the programmer does not over-ride the playback.

### **10.11 Playbacks ignore masters levels**

Sometimes it is necessary to program playbacks that are not affected by the Grand Master or Sub Master. Use the “Masters do not affect level” option to prevent the Cue Stack being affected by the master faders – this is useful for controlling channels that must stay up – e.g. house lights, smoke machines etc... Cue Stacks set with this option are not affected by grand master, sub master, DBO button.

## 11 Live Programming (Busking)

### 11.1 Adding individual channels using preset faders

Individual channels can be added into the show as required using the Intensities Windows. Channels can be added using the faders in either the Programmer View or the Presets View.

Channels added in the Programmer View are added into the programmer in the usual way. If the programmer is cleared then they are cleared. Channels added using the Presets View are not affected by operations on the programmer - they act like preset faders.

Channels added in both views are affected by the Grand Master and by the pressing of SWAP buttons.

### 11.2 Over-ride / take-over

The MagicQ architecture intrinsically supports the combined use of the programmer, playbacks and preset faders so that there is no need to constantly swap between modes, losing your overridden effects. This makes the console ideal for busking shows.

ADD and SWAP buttons work regardless of whether you are programming or playing back. Similarly the programmer works as an over-ride, regardless of what you are doing.

By default, the console makes no distinction between programming and run modes. Some operators may wish to restrict what is allowed in run mode – this can be configured in the Setup Window. You can choose to disable programming or to disable modification of programmed Cues / Cue Stacks.

### 11.3 Viewing Cues and Cue Stacks

The Cue and Cue Stack Windows are used to monitor and adjust the execution of Cues and Cue Stacks respectively. To open both windows on the screen sized appropriately you can use the predefined Cue Stacks view – press CTRL and select the Cue Stacks soft button. Both windows monitor the current playback.

For a Cue Stack with a single Cue recorded on it, then the Cue Stack window will not be of much interest. In this case the Cue can be monitored and adjusted using the Cue Window.

For a Cue Stack with multiple Cues, the Cue Stack window can be used to watch the progress of the Cue Stack. The position within the Cue Stack can be changed along with the timing information. You can make the Cue Stack window follow the Cue currently executing on the selected playback - set the Display Current Cue option to YES in the Cue Stack Window.

### 11.4 Modifying chase speed / contrast

To modify the speed or contrast of a Cue Stack that is running with Chase Timing, press the SELECT button for the playback, and then adjust the encoders in the Cue Stack Window. The chase direction and chase type (Normal, Bounce, Random) can also be selected. Pressing and holding the SELECT button of a Playback with a chase on it automatically opens the Cue Stack Window.

Use the top right encoder to modify individual attributes - Position, Beam, Colour, Intensity In and Intensity Out (soft button selects the different attributes). Once the speed of an attribute is changed it is

no longer controlled by the master chase speed. Modifying the attribute so that it is the same as the master chase speed brings it back under control of the master chase speed.

Modifications are retained even after the playback is released.

### **11.5 Modifying FX parameters**

To modify the parameters of a FX that is programmed in a Cue, press the SELECT button for the playback, and then adjust the encoders in the Cue Window.

FX size, shape, spread and speed are all adjustable.

Modifications are retained even after the playback is released.

### **11.6 Stop / Starting Cue Stacks**

Cue Stacks can be started and stopped using the GO and STOP buttons associated with the playback.

For wing playbacks, make the playback the current playback and then press the GO / STOP buttons in the manual control section.

### **11.7 Jumping to a Cue in a Cue Stack**

There are several ways to jump to a specific Cue in a Cue Stack. First open the Cue Stack window.

Use the cursor keys or press the touch screen to move the cursor to the required Cue. Press the GOTO CUE soft button to jump directly to the Cue. Alternatively key in the Cue ID within the Cue Stack of the Cue you wish to jump to and press GOTO CUE.

Pressing the PRELOAD CUE button rather than the GOTO CUE button selects the Cue that will be executed when the GO button for the Cue Stack is next pressed. This enables the next Cue to be selected in advance of the Cue being required.

Pressing ENTER in the first column of the Cue Stack also jumps to the specified Cue.

### **11.8 Over-riding using the programmer**

When playing back a show, you can over-ride the programmed effect in the playbacks by using the programmer. For instance, assume that you are running a yellow circle on your MAC500s. You wish to change the colour to Red.

Select the MAC500s from the Group Window.

In the Colour Window select the Red palette entry.

If you wish to remove the over-ride then you can either clear all off the programmer by pressing CLEAR. Alternatively you can remove only certain attributes or certain heads by selecting the items with the cursor in the Prog Window and pressing the REMOVE soft button.

When you press CLEAR or remove selected heads from the programmer, the programming will be immediately removed and the heads will be controlled by the playbacks as if the programming had not

been applied. This is different to some other consoles where clearing the programmer has non deterministic effects.

Note that in order to over-ride individual attributes of an intelligent head you need to be in SELECT BY CHAN rather than SELECT BY HEAD mode. If you are in SELECT BY HEAD mode then all of the head attributes will be set to what is in the programmer.

### **11.9 Adding in new FX**

Since the MagicQ does not make a distinction between programming and run modes, it is always possible to busk new FX. For instance, assume that you have an active playback which has the MAC500s statically focused on the centre vocals position. You now wish to temporarily add in a tilt saw.

Select the MAC500s from the Group Window.  
In the Prog Window, select the ADD FX soft button.  
Select the TILT SAW FX.  
Adjust the encoder wheels as appropriate.

If you wish to set the speed / size of the FX before you make it live on stage, then go into BLIND mode before you ADD in the FX. Then you can adjust the chase without affecting the stage output. Use the Move View in the Outputs Window to get a 2D picture of how your FX will look. Then when you are happy, go out of BLIND mode and the FX will appear on stage.

Alternatively use the ADD FX ZERO SIZE soft button – this adds an FX into the programmer exactly as when using the ADD FX soft button except that the Zero Size option is set. You can then select the size you want using the SIZE encoder before pressing the ZERO SIZE soft button to clear the Zero Size option.

Pressing and releasing BLIND will enable you to busk the FX in and out – e.g. in the chorus / verse transitions.

### **11.10 Applying palettes with time**

Palettes can be applied with a time by simple entering a time in seconds before selecting the palette entry to apply.

For example, to apply a 4.5 second movement from the current position to your programmed centre vocals position, simply type 4.5 and select the vocals position in the Position Window.

The fades are carried out in the programmer (you don't need any playbacks free). All attributes in the palette are faded regardless of whether they are marked as instant or fading in the personality file.

If you apply a palette with time whilst in FAN mode then the times will be fanned across the different heads in the order that the heads have been selected. See [using palettes with time](#).

### **11.11 Releasing / Clearing with time**

Release times can be set on a per Cue Stack basis, in the Cue Stack Options. Default release times can be set up in the Cue Stack, Defaults view including times for Cue Stacks with single Cues and Cue Stacks with multiple Cues.

It is also possible to release a Playback with time by typing a number and then pressing REL. For example, 3 REL releases the currently selected playback over 3 seconds.

In addition it is possible to clear the programmer and to enter and exit blind mode with times. Press 5 CLEAR to clear the programmer over 5 seconds. Press 10 BLIND to enter blind mode over 10 seconds.

### **11.12 Busking Master**

It is possible in the Setup Window to set the manual cross-fade fader to be a “busking rate” sub-master from 0 seconds to 10 seconds. The rate is shown in the bottom right of the status window. The time is applied to selection of palettes and intensities. When FAN mode is selected the change is applied in turn across each of the selected heads.

## 12 System Management

### 12.1 Starting Up

First of all power the console up...

If power is good then an introductory window is displayed on the screen. You are prompted to continue the current show, to start a new show, or to follow a Help Tutorial. If you choose to continue the current show or start a new show, you can revert to the Help Window by pressing the HELP button at any time.

Note that as the console utilises a hard disk system it is necessary to shut the console down before removing power to it. Removing power to the console when it is running may cause problems with the file system. Normally this will only result in a subsequent slow start-up whilst the system repairs the disk – however in certain circumstances the file system may become corrupted. If you always follow the instructions for shutting down you will have no problems.

When the console starts up it loads the last show file that was saved – either a file explicitly saved by you, or the last backup file it automatically saved.

### 12.2 Shutting Down

To shut the console down, press the QUIT soft button in the Setup Window. When asked for confirmation, select yes. The console powers down automatically when it has completed its shutdown sequence.

### 12.3 Saving Shows

The MagicQ utilises a large hard disk to enable storage of a virtually infinite number of shows. When you are programming a show the show is stored in memory. In order to store your show on the disk you need to press the SAVE SHOW soft button in the Setup Window.

Whilst programming, you should regularly save your show, so that if the unexpected happens and the power fails your show data is not lost. You can chose any filename. The console will automatically set the file extension to .shw.

By default, the console periodically saves a backup of your show to disk. It uses the same show name but with the file extension .sbk.

It is a good idea to save your show to different file names so that you have various points you can back-track to if things go wrong. For example, save the show as myshow-patch.shw after you have patched and then as myshow-final.shw after you have finished programming.

When you shut down the console through the QUIT soft button in the Setup Window, the console automatically saves a backup copy of your show with a .sbk extension. When you subsequently restart the console this file will be re-loaded. This ensures that the console starts up as it was when the QUIT soft button was pressed.

The Setup Window indicates when the show has not been saved (or autosaved) for over 10 minutes.

## 12.4 Backing up to an external system

It is a good idea to back up your show to an external system. This ensures that should the unexpected happen you can transfer your show to another console. In a touring environment where the console is being moved every day we recommend you back up your show to an external system before moving the console.

You can either backup by [transferring files over ethernet](#) or via USB memory stick. To backup to USB memory stick, first insert a USB memory stick into the USB slot in the front or the back of the console then press the BACKUP TO USB soft button in the Setup Window.

The USB memory stick should be formatted for a standard Windows file system (VFAT) – they generally come like this. This enables the memory stick to be used in both the console and standard PCs running Windows.

## 12.5 Loading Shows

You can load a show that you have previously saved using the LOAD SHOW soft button in the Setup Window. If you load a new show it will erase any existing programming. The console will prompt you for confirmation.

Be careful to choose which type of show file you want to load – the .shw files are the ones you saved, whilst the .sbk ones are auto backups.

## 12.6 Erasing

To erase the entire show from memory, go to the Setup Window and press the ERASE SHOW soft button. You will be asked to confirm by selecting YES. You will then be asked for which initial mode you want the console to be set up for, Normal, Theatre Non Track or Theatre Tracking. If in doubt, select Normal.

Erasing a show clears all patching, all programming and all palettes.

It does not clear console specific options such as the configuration of the DMX outputs or the calibration of the touch screen.

## 12.7 Import and Export of Show Data and Show Merging

The Setup Window supports export of selected parts of the show, and import of show data for show merging.

Press SHIFT and SAVE SHOW to export part of the current show. Only the currently selected heads are exported. All groups, palettes, cues and cue stacks that contain one or more of the selected heads are exported – but only with the data from the selected heads.

Press SHIFT and LOAD SHOW to import a show into the current show. A selection of options are presented to determine which elements of show data are loaded and how they are merged into the current show data.

Options include choosing whether Settings, Patch, Palettes, Cues, Cue Stacks and Playback assignments are loaded from the imported show file. Additionally you can choose whether Palettes, Cues and Pages are merged together, or whether new Palettes, Cues and Pages are generated.

Channels from the imported show keep their DMX address unless they clash with channels in the original show – in which case they are moved to the first free location.

If the Merge Pages option is selected then Playback assignments are kept on the same Page as they were in the imported show – but they may be moved onto higher Playbacks (e.g. Playback wings) on the same page. This allows, for example two different shows created on a MQ100 to be merged onto a single MQ200.

## **12.8 Saving and Loading Settings**

You can save your favourite show settings to a file. Settings include the options from the Setup Window, the defaults from the Cue Stack Window and the Views that you have set up.

Once you have become familiar with the console, it is a good idea to save your preferred settings to a file so that then when you start a new show you can load your settings in.

## **12.9 File Manager**

You can organise your show files using the File Manager in the Setup Window. File Manager supports renaming, moving, copying and deleting of files.

All show files are located in the show directory. The show directory has sub directories for fx and heads.

File manager can operate on both the internal hard disk and external USB memory sticks. To copy a file to the USB stick:

Select HARD DRIVE soft button.

Press COPY and then select the file you wish to copy.

Select USB DRIVE soft button

Select the “.” entry.

Moving is done in a similar way using the MOVE action button. Renaming and deleting use the NAME and REMOVE action buttons respectively.

## **12.10 Transferring files over Ethernet**

The console supports remote file system access over Ethernet. Files can be accessed whilst the console is running and outputting ArtNet thus allowing, for instance, users to set up automatic show back-ups to an external server.

Connect the console to the host system – typically a PC – either using a direct Ethernet crossover cable or via Ethernet hubs.

Configure the IP addresses of the host system and the console so that they are on the same sub-net. For instance if the console is set to IP address 2.9.200.5, subnet mask 255.0.0.0 then set the host system to IP address 2.9.200.6 subnet mask 255.0.0.0.

Connect to the file system. Under Windows this can be achieved by selecting Network Neighbourhood in Windows Explorer. The console should appear as a computer. Log in as user magicq with password magicq.

On some Windows systems you may need to create a user account magicq with password magicq to enable Windows to connect to the console.

You can then transfer files between the host and the console. Show files, personality files, FX files and Patch files can all be transferred in this way.

If you have problems putting files onto the console then try pressing the Set Rem Access soft button in the File Manager window.

### **12.11 Status Window**

There is a status window in the Setup Window, View System. This shows data associated with the console and with the currently loaded show. This includes show size, data used, last saved times.

### **12.12 Editing Heads**

The console includes a fully featured [Head Editor](#). From the Patch Window press the Edit Head soft button. The Head Editor allows you generate personalities for new heads. You can either start from a blank head file, or you can copy an existing head.

The console stores copies of the head data for all patched heads and all heads that you have edited in memory until the show is erased.

Changes that you make in the Head Editor immediately affect the heads patched on the console and any new heads of that type you patch into the current show. However, you need to save the changes permanently to disk if you wish the changes to continue to take effect after you erase the show.

### **12.13 Backup Archives**

By default the console stores an archive of the show files for every quarter of an hour of the day, and for every day of the week. This enables the user to revert to a previous copy of their show.

Archive files are only made when the console auto saves – so if auto saves are disabled then no archive files will be generated. If the console is set to “auto save on changes” then archive files will only be stored when changes are made. To revert to an archived file press SHIFT and LOAD SHOW in the Setup Window.

Archive files are stored in a special directory that should not be modified by the user. When the user reloads an archived backup file, the backup file is restored into the standard show directory.

Archive files have the name “backup0530.sbk” to indicate the show file that was recorded just before 5.30am. Daily files are also stored – “backupfri.sbk” indicates the show file that was recorded at the start of Friday. Archive files are overwritten every 24 hours, except for the daily files which are overwritten every 7 days.

## 12.14 Using shows on different MagicQ products and show versions

In general MagicQ show files are backwards and forwards compatible. Thus you can load any show into any version of software. Loading shows created and modified on newer software versions into older software versions may result in some features not being supported or not working exactly as expected.

In March 2006 new MagicQ consoles were changed from 6 universes to 12 universes. MagicQ software version v1.2.5.4 and above supports 12 universes.

### 12.14.1 Configuring 12 Universes

To enable 12 universes, go to Setup Window and VIEW DMX I/O and select “SET 12 UNIVERSES” soft button. It is necessary to restart MagicQ before the changes take effect. To go back to 12 universes, select the “SET 6 UNIVERSES” soft button.

Show files are compatible – except that it is not possible to load a show using all 12 universes (i.e. that has channels patched to universes 7 to 12) into a console set to support 6 universes.

Shows that only use universes 1 to 6 can be loaded into consoles set to either 6 or 12 universes.

MagicQ MQ100, MQ200, MQ300 consoles purchased before March 2006 require a hardware upgrade to safely run 12 universes – this increases the processor power to guarantee performance. MagicQ MQ50 supports only 6 universes.

MagicQ PC can support 12 universes – performance will depend upon the specification of the PC. Latest PCs can easily support 12 universes fully loaded.

## 13 Settings

### 13.1 Programming and Playback modes

The MagicQ console allows the programming mode and playback mode to be configured in the Setup Window. The modes control several of the different settings of the console. All of the settings can be configured individually – however, the modes make it easy to change between the most frequently used settings.

The programming mode determines how the console is programmed. The options are Normal, Theatre non-track, and Theatre tracking. Most users will choose Normal.

The playback mode determines how the console plays back cues. The options are Normal and Safe. In Normal mode the user can make changes during playback just like when they were programming the show. In Safe mode, making changes is not allowed and backups are turned off to any possible interference with the running of the show.

### 13.2 Output Settings

The console supports 12 universes in and out, which can be configured to use different protocols. Outputs must be configured and enabled before the console will output data. To set up outputs, open the Setup Window and select the VIEW DMX I/O view.

For each of the 12 universes, the output and input protocol can be selected in the Out Type and In Type fields respectively. Press ENTER or double click to change to the next protocol type.

The possible protocols are

None	No protocol
ArtNet	ArtNet protocol (over Ethernet)
Pathport	Pathport protocol (over Ethernet)
PC wing	DMX512 outputs on MagicQ PC wing, Mini Wing or Maxi Wing
Cham USB	ChamSys DMX option modules and ChamSys USB to DMX modules
Art Par	Artistic License parallel port dongle
Open USB	Open USB dongle - e.g. Enttec Open USB
Enttec Pro	Enttec Pro dongle
Dig Enlightenment	Digital Enlightenment dongles
Peperoni	Peperoni dongles and devices
DMX4ALL	DMX4ALL devices
USBDMX	USBDMX devices

ChamSys supports 3<sup>rd</sup> party DMX dongles but cannot guarantee their performance. Art Par, Open USB, Enttec Pro, DMX4ALL, Dig Enlightenment, DMX4ALL, Peperoni, USBDMX are supported on Universe 1 only. Note that some of these devices rely on the PC to do the DMX framing and therefore results may be unpredictable on some systems. Many of these devices are unable to transmit full DMX frames at the full DMX refresh rate.

ChamSys USB to DMX modules and ChamSys Ethernet to DMX Interfaces utilise their own internal processor to ensure correct DMX framing at high DMX refresh rates.

For Ethernet based protocols such as ArtNet and Pathport it is necessary to set up the Out Uni and In Uni fields - these determine which the ID of the Universe when carried over Ethernet. These need to be set up to

match the IDs configured on the Ethernet Interface boxes. Where large numbers of universes are being carried over Ethernet it may also be necessary to configure the Subnet ID - this can be found in the View Settings view of the Setup Window.

To use a ChamSys Ethernet interface box, set Universes 1 to 3 to an Out Type of Art-Net, an In Type of Art-Net and enable them. Set the Out Uni and the In Uni for Universe 1 to 0, for Universe 2 to 1 and Universe 3 to 2.

For ChamSys USB interfaces (fitted in the back of the console) and ChamSys USB to DMX modules, select Cham USB. Then select the module and port in the Out Uni field. For example, for the twin DMX output module on the back panel select Mod 1 Port 1 and Mod 1 Port 2 for the two outputs. Any of the console Universes can be output to ChamSys DMX modules

MagicQ software originally supported only 6 universes. To change between 6 and 12 universe operation please see [Configuring 12 universes](#).

### 13.2.1 Using the MagicQ PC wing DMX512 outputs

To utilise the DMX512 outputs on the PC wing configure Universes 1 and 2 to be "PC Wing" and enable the two universes. In latest software the PC Wing outputs can be assigned to any of the supported universes - the first two Universes set to PC Wing will be output to the PC Wing.

For MagicQ MaxiWing you can configure up to 4 universes, whilst for MagicQ MiniWing you can configure only one universe.

Note that it is also possible to use the MagicQ PC Wing direct DMX outputs with a MagicQ console – simply connect the MagicQ PC Wing to the MagicQ console using a USB cable and set the outputs as above.

### 13.2.2 Hot take-over

The console supports hot take-over to enable a second console (or MagicQ PC) to take-over running the show if the first console has a problem. In hot take-over mode, the second console has its universes disabled but set to hot take-over. The second console monitors the Ethernet for input data on the universe and if data is not present for a defined period seconds then it automatically enables the universe, thus giving control to the second console.

For how to use hot take-over see [Using Multiple Consoles](#).

## 13.3 Wing Settings

### 13.3.1 Connecting Playback wings

To configure Playback wings open the Setup Window and choose View System, View Wings view.

In the Type field, choose "USB Wing" for MagicQ Playback wing. When the console has detected the Playback wing it will show as "Fitted" in the status window.

### 13.3.2 Connecting a MagicQ PC Wing to MagicQ PC

Before you can use the MagicQ PC Wing the driver software must be installed on the PC - instructions for installation are supplied with the MagicQ PC Wing.

To enable the MagicQ PC open the Setup Window and choose the View Settings view. Page down until you reach the MagicQ PC wing option and press ENTER to change it from disabled to enabled.

The following short-cuts make programming on MagicQ PC Wing easier. The short cuts also work on MagicQ console.

Hold ALL and press a playback Select	Selects groups 1 to 10
Hold POS and press a playback Select	Selects position palette entry
Hold COL and press a playback Select	Selects colour palette entry
Hold BEAM and press a playback Select	Selects beam page or beam palette entry
Hold ALL and press Next Head	Selects next group
Hold ALL and press Prev Head	Selects previous group
Hold POS, COL, or BEAM and press Next Head	Selects next range for last encoder changed
Hold POS, COL or BEAM and press Prev Head	Selects previous range for last encoder changed

### 13.3.3 Connecting MagicQ consoles together

It is possible to connect multiple MagicQ consoles together in order to control a larger number of Universes. The master MagicQ console then outputs some channels which act like playbacks for the slave consoles.

On the slave consoles, one of the wings is configured as "DMX In" and select a range of channels for it to respond to. Note that the universe that contains these channels must have input enabled in the "View DMX I/O" view. This causes the playbacks on the wing to be controlled by up to 24 DMX channels received into the console. The level of the playback is determined from the received channel.

### 13.3.4 Using an external DMX console for extra playbacks

It is possible to use an external DMX console to gain extra playback controls. This is not a replacement for a MagicQ Playback wing with its legending and Cue Stack controls, however it may be useful in certain circumstances.

Configure an unused wing to be "DMX In" and select a range of channels for it to respond to. Note that the universe that contains these channels must have input enabled in the "View DMX I/O" view.

In order to allow use of FLASH buttons on the external DMX console, MagicQ uses the top 5% of the channel range as an indication that a FLASH button has been pressed. On the external console the playback master fader should be configured at a maximum of 95% with the flash master set to 100%. If it is not possible to set the master levels independently on the external DMX console then set the grand master on it to 95%.

## 13.4 Security settings

### 13.4.1 Disable Programming

This option in the Setup Window allows recording of show data to be disabled. This prevents show data from being recorded, moved, copied or updated. Use this option to prevent show data being changed.

When this option is set to disable recording, parameters of Cue Stacks and Cues such as Chase Speed, Shape Size and times may still be modified. To prevent all modification use Disable Modifications in addition to Disable Programming.

#### 13.4.2 Disable Modifications

This option in the Setup Window prevents Cue Stack and Cue data from being modified. Use this option to ensure that programmed Cues and Cue Stacks are played back exactly as they were programmed.

#### 13.4.3 Disable Test Mode

This option in the Setup Window prevents the user from testing Cues, Cue Stack, Playbacks and Patched Heads from the respective Windows. Use this option to avoid accidental operation of these features.

#### 13.4.4 Auto Backup

This option enables automatic back ups. It can be set to No, Yes, and On Changes. By default it is set to On Changes.

For playback of shows you may wish to turn back ups off, especially if you have a very large show as the back-up process may occasionally affect the response of the console. We recommend you keep them on (On Changes) for programming.

#### 13.4.5 Keep a backup archive

With this option enabled the MagicQ console keeps an [archive](#) of back-ups. It will only archive back-ups created using Auto Backup above – therefore if you turn auto backup off then you will not have an archive.

### 13.5 Programming settings

Programming settings are automatically changed when you select the mode – Normal, Theatre non-tracking and Theatre Tracking.

#### 13.5.1 Activate Chans / Heads

This option determines how channels are activated in the Programmer. If set to Chans then when an attribute of a head is modified only that channel is affected. If set to Heads then when an attribute of a head is modified all the channels of that head are activated in the programmer. The channels are activated using the value that they were at before they were last cleared from the programmer.

Selecting Activate Heads ensures that all the channels of a head are always present when recording a Cue. Note that if you plan to over-ride attributes of head during playback then you are likely to require Activate Chans – otherwise all attributes of the head will be over-ridden.

### 13.5.2 Tracking

This option turns [tracking](#) on and off.

Users should be aware that playback of Cue Stacks also depends on the settings on each Cue in the Cue Stack – there are the three options.

Zero old HTP

Zero old FX

Rel unused chans

Users who wish to use tracking should turn off the Zero old HTP and Zero old FX in all Cue Stack steps. The defaults for these options can be changed in the Cue Stack, View Defaults window.

### 13.5.3 Chans default to Locate vals

This option determines what happens to LTP channels that are not controlled by any playbacks or the programmer. When enabled, channels default to the Locate values specified in the personality. When disabled, channels hold their last value.

### 13.5.4 Programmer overides HTP values

This option determines whether the programmer overides HTP values on playbacks. When enabled, any HTP channels in the programmer are no longer affected by the levels of those channels on playbacks.

### 13.5.5 Auto enter on keypad intensity set

This option determines whether when entering keypad intensity settings an ENTER is required. If set then an auto enter is processed when 2 digits have been keyed in after @ or immediately after FULL.

1 THRU 4 @ 50

or

1 THRU 4 @ FULL

### 13.5.6 Select heads on keypad intensity set

This option determines whether the current head selection is modified when you set intensities using the keypad. If this option is not set then intensities are set without modifying the head selection. If set, then the intensities are set and then the head selection is modified, for example:

1 THRU 4 @ 50 ENTER

sets heads 1 to 4 at 50% intensity and selects heads 1 to 4.

+5 @ FULL

sets head 5 to 100% intensity and adds head 5 to the current selection

#### 13.5.7 Select heads in Col, Beam, Pos

This option enables you to select heads by typing the head selection and then pressing the appropriate Colour, Beam or Position Window button.

1 THRU 4 COL

selects heads 1 through 4 and opens the Colour Window.

#### 13.5.8 Select heads on include

This option determines whether when you include Cues and Palette entries into the programmer the console automatically selects the heads.

If enabled, the console selects all heads that have levels in the Cue or Palette entry.

#### 13.5.9 Highlight defaults beam and col

This option determines which highlight mode is used by the console.

When enabled, highlight mode sets all currently selected fixtures to 100% intensity and default beam and colour settings.

When disabled, highlight mode simply reduces all non selected fixtures in the programmer to 0% intensity.

#### 13.5.10 Select Multiple Groups

Setting the "Select Multiple Groups" option in the Setup Window changes behaviour so that multiple groups can be selected without pressing SHIFT. To deselect all groups press the DESELECT ALL soft button in the Group Window.

#### 13.5.11 Enable undo

This option enables undo of programmer changes. The ASSIGN button has been changed to be the UNDO button. Assign functions are now available using the MOVE and COPY buttons.

Pressing SHIFT and UNDO redoes the last change.

#### 13.5.12 Swap Encoders

The Pan and Tilt encoders can be swapped over as can the direction of all encoders.

## 13.6 Playback Settings

### 13.6.1 Grand Master and Sub Master configuration

The Grand Master and Sub Master default to controlling the overall HTP level of the console and the playback master level respectively. They can be configured to have alternative functions.

The Grand Master can be configured to control only the level of preset faders, as accessed through the [Intensities Preset View](#). Alternatively, it may be configured to control only the level of [programmer](#) data, or it may control both. In each of these configurations it does not control [playbacks](#) or [add/swap](#) levels.

The Sub Master can be configured to control either [playback](#) faders only, or [add/swap](#) buttons only, or both (the default).

### 13.6.2 Manual Cross Fade Master

The Cross-fade master can be configured in several different ways:

Manual cross-fade (default)  
Rate master  
Global rate master  
Busking rate master

See [manual control](#), [rate master](#) and [busking rate master](#) for more details.

### 13.6.3 Playback Stomping

There is a [Playback Stomping](#) option in the Setup Window, View Settings. With this option enabled playbacks that have been fully overridden by other playbacks will be automatically released (stomped).

### 13.6.4 Current Playback follows last touched

This option makes the Current Playback track the last Playback fader to be raised. If the option is disabled then the Current Playback is not changed when faders are raised - it is only changed when SELECT buttons are pressed.

### 13.6.5 Activate first playback on start

This option enables the first playback to be activated on start up. This can then be used to activate other playbacks and potentially run a complete show without user intervention.

### 13.6.6 Run in Execute Window

This option starts the console / MagicQ PC up in the [Execute Window](#).

### 13.6.7 Individual Playback Settings

Playback settings for individual Cue Stacks are configured from the View Options and View Defaults views in the Cue Stacks Window.

Do you want playbacks to go active as soon as you raise a fader (i.e. rock and roll style) or do you want to use the GO button to activate a playback (theatre style)? You can use the AUTO ACTIVATE and the GO STOP soft buttons respectively to modify the way playbacks are activated.

The defaults for when CUE STACKS are programmed are set in the View Defaults view. It is possible to change the settings on a per CUE STACK basis at any time through the View Options view.

## 13.7 General Settings

### 13.7.1 Colour Scheme

Choose the normal (yellow) scheme or a grey colour scheme.

### 13.7.2 Skip confirmation requests

This option disables confirmation requests when recording and deleting programming. Use this option with care!

### 13.7.3 Don't display scroll bars

For testing purposes only. This option should always be set to NO.

### 13.7.4 Inhibit Logging

This option stops logging. This option should always be set to NO except when directed by ChamSys support.

### 13.7.5 Don't display help at start-up

This option is for testing purposes only. This option should always be set to NO except when directed by ChamSys support.

### 13.7.6 MagicQ PC keyboard busking mode

Keyboard busk mode enables the keyboard to be used to control the running of a show from MagicQ PC. The key mapping for keyboard busk mode is as follows.

F1 to F10	toggle playbacks 1 to 10 on/off
1 to 0	select playbacks 1 to 10
Q to P	GO button playbacks 1 to 10
A to ;	STOP button playbacks 1 to 10
\ to .	Swap to this playback on
'	Add / Swap mode
SPACE	Manual GO
#	Manual STOP
[	Next page
]	Prev page
-	Release

Note that in keyboard busk mode many programming options will not work as expected because the keys are used for busking.

### 13.7.7 Splash screen image

Users can now add their own splash screen by copying their splash image named usersplash.bmp into the MagicQ folder. This will be used in favour of the default splash.bmp.

## 13.8 Cue Storage Settings

### 13.8.1 Delete Cues when delete Cue Stacks

With this option you can force Cues to be deleted when the Cue Stack that uses them is deleted. Cues are only deleted if they are not used in other Cue Stacks. This option defaults to NO.

### 13.8.2 Delete Cue Stacks on remove Playbacks

With this option you can force Cue Stacks to be deleted when the Playback is deleted. Cue Stacks are only deleted if they are not used in other Playbacks. This option defaults to NO.

### 13.8.3 Use first free Cue for record

By default MagicQ uses the lowest free Cue when recording new Cues. Disabling this option forces MagicQ to record Cues at the next free Cue after the last one recorded.

## 13.9 Interface Settings

### 13.9.1 TCP/IP and Parallel Port Addresses

The console stores the TCP/IP addresses for the network interface and the parallel port address for parallel dongle type interfaces. The addresses are configured in the Setup Window. The addresses are stored as part of the console configuration rather than as part of the show data. Thus erasing show data does not affect their configuration.

For communicating with an ArtNet convertor the TCP/IP address must be set to a number in the range 2.x.x.x (e.g. 2.9.200.1) and the Sub net address must be set to 255.0.0.0.

On software prior to v1.2.0.0 modifications to the TCP/IP addresses and the parallel port addresses only take effect after a restart of the application software. To restart the application software open the Setup Window and then whilst holding SHIFT down press the QUIT soft button. Confirm yes and the software will restart within a few seconds.

Note that on the MagicQ PC the TCP/IP address of the PC system is configured through Windows rather than through the MagicQ PC software. However the MagicQ PC software must also be told the TCP/IP address so that it knows which network interface to use.

The ArtNet / Pathport subnet is the subnet specific to the ArtNet and Pathport protocols. Usually this can be left set to 0. When using large numbers of universes you may need to set this to avoid conflict with other consoles.

### 13.9.2 MagicQ PC Wing

Enable this option when a MagicQ PC Wing is connected.

### 13.9.3 External Windows (Multi Window)

Enable this option for use of external windows via the [MagicQ MultiWindow](#) PC application.

## **13.10 Port Settings**

### 13.10.1 Serial COM port

MagicQ supports one serial port for remote connections. On MagicQ consoles select COM1. On MagicQ PC select a COM port from COM1 to COM8 depending on which COM port you wish to use.

### 13.10.2 Serial baud rate

MagicQ consoles support baud rates from 300 to 57600. Baud rates supported on MagicQ PC will depend on the PC.

### 13.10.3 Serial parity

MagicQ PC supports None, Odd, Even, Mark and Space. MagicQ consoles only support None, Odd, Even.

### 13.10.4 Serial data bits

Data bit sizes of 4,5,6,7 and 8 are supported.

### 13.10.5 Serial stop bits

MagicQ PC Supports 1,1.5 or 2 stop bits. MagicQ consoles support 1 or 2 stop bits.

### 13.10.6 Serial remote protocol

Determines what protocol is used on the serial port. If set to “none” then any data received is ignored. Data can be transmitted from the Macro field of Cue steps in the Cue Stack.

The other protocols are:

ChamSys Rem (rx)  
ChamSys Rem (tx & rx)  
ChamSys Rem (tx)

Ideal Touch  
A1 Touch  
Elo Touch

The Touch protocols are for the use of external touch screens with the MQ50, MQ100, MQ200 and MQ300 consoles. Refer to the instruction manual of your touch screen for other serial settings.

See [Serial Communications](#) and [Multiple Consoles](#) for more details.

#### 13.10.7 Remote trigger type & action

Settings for the [remote trigger input](#).

#### 13.10.8 Time-code

The time-code type can be set to EBU-25, SMPTE30, NTSC30 and Film 24. When a ChamSys MIDI/SMPTE module is fitted the Status Window will show the current time-code being received from the module.

The time-code continue time is the number of frames to continue internal regeneration of the time-code signal when it is lost. After this time the time-code will be frozen until a signal is received again.

#### 13.10.9 Audio Input

Settings for audio input.

#### 13.10.10 Ethernet remote protocol

Determines what protocol is used on the Ethernet communications. If set to “none” then any data received is ignored. Data can be transmitted from the Macro field of Cue steps in the Cue Stack.

The other protocols are:

ChamSys Rem (rx)  
ChamSys Rem (tx & rx)  
ChamSys Rem (tx)

See [Ethernet Communications](#) and [Multiple Consoles](#) for more details.

### **13.11 Multiple Console Settings**

See [multiple consoles](#).

### **13.12 Hardware Settings**

#### 13.12.1 Level above 0 to activate LTP

In some circumstances Playbacks may get triggered erroneously even when the fader has not been raised above 0. In these circumstances setting this level to a level above 0 (e.g. 5) may remove the erroneous triggers.

### 13.12.2 Hysteresis on fader / encoder moves

In some circumstances faders or encoders may become faulty and generate excess noise – in these circumstances setting this level to a level above 0 (e.g. 5) may remove the effect of the fault.

### 13.12.3 Disable Touch Screen / Encoders / Faders

If the touch screen, encoders or faders go faulty they might cause unexpected changes in parameters – to overcome these parameters the faulty element can be disabled.

### 13.12.4 Encoder Damping

Use this option on a MagicQ PC Wing to improve the performance of the encoder wheels. This option does not have any effect on MagicQ consoles.

### 13.12.5 Reduced rate DMX

Some older DMX equipment is not able to work at full DMX speed. Use this option to reduce the DMX refresh rate – note that this option is only applicable to the ArtNet and Enttec dongles since when using ArtNet and Pathport the DMX refresh is under control of the convertor box.

Some Ethernet Interfaces and network hubs are unable to handle high levels of Ethernet traffic, for example all 12 MagicQ universes output simultaneously. On these devices set this option to “Mixed” – this sends the Ethernet data at the same rate, but in alternating order, thus ensuring that the Ethernet Interface can pick up the data.

## **13.13 Re-calibrating the touch screen**

If the touch screen does not respond accurately to the position that you are pressing on the screen then you may need to re-calibrate the touch screen. Don't be afraid, this is a painless exercise!

In the Setup Window press the Cal Touch button - use the physical button rather than the pressing the touch screen. This puts the screen into calibration mode. To calibrate the touch screen simply press the screen in the bottom left corner of the screen and then the top right corner of the screen. Press the screen on the corners where the displayed graphics starts/ends.

It does not matter which order you press the screen in. If you feel you have pressed the wrong bit of the screen just press the screen again in the correct position.

When you are satisfied you have pressed the correct position then press Cal Touch button to leave the calibration mode. Make sure you use the physical button rather than pressing the touch screen, as pressing the touch screen messes up the calibration.

You should now find that the touch screen is more accurate. If you continue to have problems then try pressing the screen with a small blunt object, but don't use a sharp object as it may damage the touch screen.

### 13.14 Displays brightness and contrast

To modify the brightness of the main display, press CTRL and adjust the bottom right encoder. To modify the brightness of the LCD displays on the wing, press CTRL and adjust the next encoder up on the right. To turn all the displays off press CTRL and the button associated with the bottom right encoder.

To turn off the all the lights on the console (i.e. the displays, the console lights and the LEDs) press CTRL and the "All Lights" off button.

To modify the contrast of Playback wings use the Wing Contrast encoder. When multiple Playback wings are connected press CTRL and the Next Page button of the Wing you wish to change the contrast on.

### 13.15 Console lamp brightness

To modify the brightness of the console lamps press CTRL and adjust the top right encoder. To turn all console lamps on or off, press CTRL and the button associated with the top right encoder.

### 13.16 LED brightness

To modify the brightness of the LEDs, press CTRL and adjust the bottom left encoder.

Note that the brightness of the LEDs can only be adjusted from full to dim - they can not be turned off completely. This ensures that there is always an indication that the console is powered.

### 13.17 Locking the console

The console supports a simple locking mode to avoid accidental button presses affecting the output or programmed data. Press CTRL and the button associated with the top left encoder to lock / unlock the console. The console will not accept any button presses while it is unlocked.

A more advanced password system will be included in future software releases.

### 13.18 Button test mode

The console supports a button test mode for checking suspect buttons and faders. To enter button test mode press the two SHIFT buttons either side of the touch screen together (i.e. hold one down and press the other).

In button test mode the buttons do not have their usual function - instead when pressed a message will be displayed in the status display indicating which button has been pressed. Faders and encoders also can be tested in a similar way.

In button test mode the Window shows a map of all the buttons, encoders and faders. When a button is pressed the map turns green to indicate that the button has been pressed and released o.k. For encoders it turns green when the encoder has been turned both ways. For faders it turns green when the fader has been lowered to 0 and raised to full.

To test LEDs, enter button test mode and then press CTRL 1 and CTRL 2 to test the different colour LEDs. Press CTRL 0 to go back to normal state of the LEDs.

Button test mode is exited in the same way that it is entered.

On MagicQ PC to enter button test mode type “test” on the keyboard then hold SHIFT and CONTROL. Hold SHIFT and press CONTROL to exit button test mode.

### ***13.19 Power Supply Protection***

Some versions of the console support an internal battery, which is designed to protect the system against short term power losses on troublesome power supplies. The internal battery is not designed to support the running of the console for long periods of time. If the power is lost then the console will prompt the user to fix the problem or to shut down the console. The battery when fully charged will support the console for between 5 and 15 minutes.

If your version of the console does not have an internal battery then we recommend the use of a UPS (Un-interruptible Power Supply).

## 14 Advanced Programming

### 14.1 Handy Hints

- Use SHIFT and the cursor keys to carry out actions on multiple items in a Window.
- When recording items, type in a name for the item on the external keyboard before pressing the REC button.
- To force a minimum look on stage (e.g. during a changeover) whilst allowing full programming capability, set the minimum value of one or more channels in the Patch Window to a non zero value.
- When using encoders, to bump to the next range value (e.g. next colour), press the button associated with the encoder. To bump back, hold SHIFT and press the button.
- To modify a playback, press and hold the SELECT button associated with the playback and then use the encoders or key in new values.
- If your CMY colours are coming out inverted – i.e. red is cyan, green is purple, blue is yellow, then you need to set the CMY Invert option for that personality in the Head Editor.
- To restart the look in the programmer press BLIND twice.
- If you find yourself constantly changing Windows to perform an action, try sizing the required Windows and recording it as a View.
- After you have cleared the programmer you can reselect the heads that were selected when you pressed CLEAR by pressing the ALL button.
- To remove attributes from an entire Cue Stack (e.g. position information) activate those attributes in the programmer and use the RECORD REMOVE option.
- To add attributes into an entire Cue Stack (e.g. position information) activate those attributes in the programmer and use the RECORD MERGE option.
- To Record Merge the current contents of the programmer into the current Cue on a Cue Stack, press and hold the Select button of the playback and press RECORD.
- Use the “Lamp On All” and “Lamp Off All” soft buttons in the Macro Window to make turning on/off an entire lighting rig easier.
- On the MagicQ PC use F1 to F10 to toggle Playbacks PB1 to PB10 on / off. Use ESC to turn all Playbacks off.

### 14.2 Keyboard macros

Keyboard macros enable you to record sequences of key presses and to replay the sequence at the press of a single button. To record a keyboard macro, go to the Macro Window, press RECORD and select a

macro to record. The console then records all of the following key sequences until you press the Macro Window button and the "End Macro" soft button.

To assign a macro to a button, press the "Assign Macro" soft button and press a key to assign it to (e.g. one of the 6 spare keys). Keyboard macros can also be assigned to a combination of keys – for example if you hold one key and press another key. Keyboard macros are saved into show files and also when you Save Settings, so that it is possible to personalise your console.

If you accidentally assign a keyboard macro to the wrong button then you can easily change the assignment. Open the Macro Window, move the cursor to the macro you want to change the assignment for and press the "Assign Macro" button. Now press the button that really wanted to assign it to.

### **14.3 Adding extra heads / dimmers to a programmed show**

There are two ways to add extra heads or dimmers to a programmed show. [Patching](#) them as new heads will cause them to be patched without any programming. [Cloning](#) existing heads will add them into existing programming.

Even if you patch new heads into a show, it is still possible to then copy programming from other heads to the new heads. To copy programmed data from one head to another press the COPY HEAD PRG soft button in the HEAD VIEW, then select the source head followed by the destination head. All the Cues, Cue Stacks, Groups and Palettes that contain the source head will be updated to include the destination head.

Another way to expand existing shows is to patch the new heads and dimmers but then in the Patch window to set a real time channel copy from another already programmed channel. The value of the channel will always be that of the already programmed channel. Any programming of the newly patched channel will be ignored. To set up real time copies edit the Merge and From Chan columns in the View Chans view of the Patch Window. Press ENTER in the Merge column to change it to "Copy" and then set the From Chan column.

### **14.4 HTP handling**

The console handles HTP (Highest Takes Precedence) channels in a very simple way - the highest value from all the playbacks, the programmer and the preset faders is the value that is output.

If the "Programmer overrides HTP chans" option is enabled then any HTP channels in the programmer will override channels on the playbacks. Channels on preset faders still affect the output.

The console supports a powerful swap mode selected through the ADD/SWAP button. In SWAP mode when a FLASH button for a playback is pressed then the HTP channels from all other playbacks are disregarded. Only playbacks with a FLASH button press affect the HTP output. Similarly, the programmer and preset faders have no effect on HTP output.

FX and channel values are handled independently enabling operators to program one playback with channel values and one with FX. For example one playback could have an ambient level whilst another has a dimmer chase. The FX is added to the highest channel value.

Note that if a Cue Stack on a Playback is set to "All chans controlled LTP" then when that Playback is activated as the last activated playback then all channels controlled by that Playback are considered to be LTP. Thus that Playback will exclusively control the levels of all channels used by the Cue Stack.

## 14.5 LTP handling

The MagicQ console provides powerful handling of LTP (Latest Takes Precedence) channels allowing new effects to be “bumped” onto intelligent heads for a period of time before reverting to the previous effect.

Note that several other consoles handle LTP channels in a less intuitive way - when the last active playback is returned to zero then the values on that playback still control the channel rather than reverting to the previous raised playback that is still active.

The programmer always over-rides playbacks. If a LTP channel is active in the programmer then playbacks will be disregarded for this channel.

FX and channel values are handled independently enabling operators to program one playback with channel values and one with FX. For example one playback could have MAC500 positions (channels) whilst another has MAC500 movements (FX).

In some circumstances it is necessary to block other playbacks from affecting a particular playback - for instance you might not want a Circle FX on one playback to affect a Tilt only FX on another playback. With both playbacks active the Pan attribute from the Circle will be merged with the Tilt. To avoid this, add a Pan FX with 0 size to the playback with the Tilt on it.

Similarly if you wish to over-ride one or more heads that have FX active on them from playbacks, then add a zero size FX to the heads in the programmer.

## 14.6 Creating rig plans

It is now possible to create a rig plan in the Outputs window, so that you can easily identify the levels and colours of your moving lights based on their position in the lighting rig. The model of the rig in MagicQ consists of a grid - each cell can be assigned to a particular head number. Grids can also be used to monitor LED arrays and other colour blocks.

In the Outputs Window, select View Plan and View Hd Nos. Press Grid Size and enter a matrix size for your lighting rig – e.g. 30/20 gives a 30 by 20 grid.

A grid is now displayed. In each of the boxes enter the head number of the head that you wish to be represented in this box. You can use SHIFT and the cursor keys to set a sequence of head numbers.

Alternatively, you can use the INSERT HEADS button to insert all patched heads into the matrix. The heads are placed in order of head number. In order to make use of this feature all heads should have unique numbers.

Note that it is not necessary to have a head number assigned to every cell in the grid – cells can be blank. This enables the lights to be positioned in the grid in a corresponding way to how the heads are positioned on the rig.

To remove a head number from a cell, press REMOVE and select the cell. Move and Copy can also be used to quickly move or copy one or more cells.

Now press View Colours to view the outputs of your rig. When a head has a level greater than 0% the box starts to get filled until at 100% it is completely filled. The colour of the lamp is also indicated.

Heads can be selected from the plan view and then their parameters changed by pressing and holding the Group, Position, Colour or Beam buttons. When the programmer setting “Highlight defaults beam and colour” is enabled, any heads selected will have their dimmer set to 100% in open white.

## 14.7 Time-code support

MagicQ supports time-code for running sequences of Cues in a specific timed sequence rather than with individual fade times. Cues can be set to time-code by changing the Halt field in the Cue Stack window.

Time code can be triggered from an external SMPTE time-code source using the optional ChamSys MIDI/SMPTE module, or it can run from the internal time-code source. To control a Cue Stack using external time-code set the “External time-code” option in the Cue Stack options.

When a Cue Stack that contains time-code cues is activated the time code takes control of the Cue Stack and each Cue executes at the time-code specified. For Internally generated time-code, activating the Cue Stack starts the time-code at 0/0/0. For external time-code the time-code will be read from the external module.

It is possible for the console to learn the timing live. Set the steps in the Cue Stack to time-code. Then release the Cue Stack, and in the Cue Stack window, press SHIFT and RECORD TC. Now press the GO button for the Cue Stack. MagicQ starts the time-code running at 0/0/0 and each time you press GO it moves to the next Cue whilst recording the current time-code into the Wait fields. At the end of the Cue Stack, press RELEASE to exit the time-code record mode.

Time-code values can be edited individually and can be set in the format 0/0/0.00. The + and – operators can be used to add or subtract times to the time-code times for one or more cues. This is useful for changing the absolute times of a Cue Stack whilst maintaining the relative times between Cues.

## 14.8 Scheduled Events

MagicQ now supports timed events. Any Cue in a Cue Stack can be set to trigger based on a scheduled event rather than following on from the previous Cue. This enables time of day and date based events to be run automatically.

To use this feature, set the Halt field in the Cue Stack Window to “Sched”. Then enter the time in the Wait field. You can enter a full time:

19/30/5 for 19 hours 30 minutes and 5 seconds

or

\*/10/0 to have the event occur every hour at 10 minutes past the hour

or

\*/\*/0 for every minute

It is also possible to set dates. Dates are entered into the macro field starting with Z and ending with Z. For example to have an event on the 24 December 2005 enter:

Z24/10/2005Z

You can also specify particular days of the week using the characters A to G where A is Monday, B is Tuesday, C is Wednesday etc...

So for an event every Monday and Tuesday enter:

ZABZ

For an event on the first day of every month enter

Z1Z

## 15 MagicQ Multi Windows

Multi Window support enables windows to be moved from the touch screen on the MagicQ Consoles onto a PC connected via network. This enables use of the entire desktop of the PC via a new PC application called MagicQ Multi Window. Windows moved onto the external PC show the same information as if they were on the MagicQ console – but with the advantage that size can be increased to show more information.

Clicking in the windows using a mouse or a touch-screen on the PC selects items as it does on the console. In addition the PC keyboard can be used to navigate around the windows.

Multi Windows is enabled by the "External Windows" option in the Setup window. To move a Window to or from an external PC, hold SHIFT and press SIZE. It is also possible to request windows from the Multi Window application - this enables full remote control of the console - for example, from the stage whilst focusing lamps.

MagicQ Multi Window can also be used with MagicQ PC to extend windows onto a second PC or to extend MagicQ PC across an entire desktop.

MagicQ Multi Windows enables access to two additional windows, the Cue Stack Info and the Outputs Info window. These windows are very similar to the Cue Stack and Outputs windows but are designed to allow more information to be shown when running MagicQ Multi Windows.

For instance by using both the Outputs and the Outputs Info windows you can view both the plan view and the data values simultaneously.

Similarly, the Cue Stack Info window is designed as a master window to keep track of the Cue Stack on the currently selected playback. The columns have been rearranged so that the comment field is shown as one of the first columns. This is ideal for theatre playback where the operator wishes to see notes about the Cues during playback – you could for instance put a comment on a Cue “Call spots when actor enters stage right”.

Both windows can be accessed from the Console if Multi Windows is not available. Press CTRL and OUT for the Outputs Info window and CTRL and CUE STACKS for the Cue Stack Info window.

## 16 Head Editor

The Head Editor is accessed from the Edit Head soft button in the Patch Window. Making changes modifies the personality files stored on the MaqicQ disc and used for all shows.

The Head Editor consists of 5 views for modifying data:

- General
- Channels
- Ranges
- Palettes
- Macros

In each of the views new values can be entered using the keypad or keyboard. New entries can be added to the lists by pressing the Insert soft button.

The Head Editor will start up with the chosen head - i.e. the last head you chose for patching. If you have not yet chosen a head then the Head Editor will be empty.

You can choose the head to edit from within the Head Editor by pressing the Choose Head button. This has the same effect as the Choose Head button in the Patch Window - i.e. you are presented with a list of heads to choose from.

Once you have made modifications to the personality you can save the changes to disc by pressing the SAVE HEAD soft button.

If you wish to start a new personality from scratch you can press the New Head soft button, whilst if you wish to copy an existing personality you can use the Save As soft button.

At any time you can choose a new head - however if you have made changes, which you have not saved to disc, then you will be prompted whether you really wish to continue. Continuing will mean that the changes will be lost unless you already have patched heads of that type - in which case the patched heads in the show will keep the changes. In either case, personalities on the disc will not keep the changes.

Press the Patch button to leave the Head Editor and return to the Patch Window.

## **16.1 General View**

The General View contains a fixed number of parameters. Note that as these parameters fundamentally affect the programming of the head they can not be modified once a head of the type has been patched.

Manufacturer Name and Head Description contain details of the type of head - they are used for informational purposes.

Short Name is used in display windows where there is not much space and the longer names would not fit. You should ensure that this name is as short as possible - preferably less than 8 characters.

Moving Head can be Mirror or Yoke - press ENTER to swap.

Max Pan and Max Tilt are used in visualisation and by the FLIP function.

Num Of Chans sets the number of channels for the head.

DMX Min, DMX Max and DMX Offset specify constraints on where the Head can be patched within the 512 DMX channels.

CMY invert controls the colour mixing channels – press ENTER to set Yes or No. The default configuration is for heads that do CMY – i.e. the when the Cyan channel is at 100% and the Magenta and Yellow channels are at 0% you get Cyan. If your head uses RGB colour mixing – i.e. the above combination gives Red – then set the CMY Invert option.

## 16.2 Channels View

This view allows the different channels of the head to be specified. Note that once a head of the type has been patched it is not possible to change the number of channels of the head.

Channels can be added using the Insert soft button and deleted using the Remove Button (press twice to Remove).

16bit channels are indicated by setting the 16bit coarse and 16bit fine field for the appropriate channels. For normal 8bit channels both fields should be set to no. The 16bit fine and coarse attributes of a moving light do not have to be on adjacent channel numbers.

The Instant field specifies whether a channel by default snaps immediately to new values rather than fading – this is useful for colour wheels and gobo wheels where you want immediate changes.

The Slow Encoder field makes the encoder works more slowly than normal. This is good for attributes where every possible DMX value represents a different function and therefore only very small turns of the encoder are required to change function.

The Attrib no field indicates to the console what the function of the channel is. No two channels should have the same Attrib no except for the two channels comprising a 16bit parameter. The attribute number determines whether the attribute is classed as Intensity, Position, Colour or Beam and which of the eight encoders it is assigned to:

Encoder A	Encoder E
Encoder B	Encoder F
Encoder C	Encoder Y
Encoder D	Encoder X

Double click on the attrib field, or press Enter to step through the possible attributes or enter the attribute number from the tables below.

### Intensity attributes (I1)

- -
- -
- -
- -
- Intensity (0)

### Position attributes (P1)

Pos1 (46)	Pos5 (50)
Pos2 (47)	Pos6 (51)
Pos3 (48)	Pan (4)
Pos4 (49)	Tilt (5)

Colour attributes (C1)

Cyan (16)	Col4 (27)
Magenta (17)	Col3 (26)
Yellow (18)	Col2 (7)
Col mix (19)	Col1 (6)

Beam attributes page 1 (B1)

Shutter (2)	Rotate2 (11)
Iris (3)	Rotate1 (10)
Focus (12)	Gobo2 (9)
FX1 (14)	Gobo1 (8)

Beam attributes page 2 (B2)

Frost1 (32)	Rotate4 (31)
Frost2 (33)	Rotate3 (30)
Zoom (13)	Gobo4 (29)
FX2 (15)	Gobo3 (28)

Beam attributes page 3 (B3)

Macro1 (22)	FX8 (39)
Macro2 (23)	FX7 (38)
FX3 (34)	FX6 (37)
FX4 (35)	FX5 (36)

Beam attributes page 4 (B4)

Cont1 (20)	Cont8 (45)
Cont2 (21)	Cont7 (44)
Cont3 (40)	Cont6 (43)
Cont4 (41)	Cont5 (42)

When making new personalities it is best to match the attributes as closely as possible to the attributes in the above table. For heads with relatively few attributes it is best to try to fit all the beam attributes on the first Beam page (B1).

The Locate field defines what value the channel is set to when a Locate is performed on the head – it is also the default value when the Programmer option “Chans default to Locate vals” is selected.

### 16.3 Ranges View

This view defines the ranges for channels that utilise specific values to access functions such as colour and gobo wheels, shutter channels and control channels. Ranges can be set up at any time regardless of whether heads of the type have been patched and the range data becomes immediately available. If the head has been patched then you can capture the minimum and maximum value fields from the programmer.

For each Range you specify the channel number (starting at 1), a name for the range (e.g. Blue) and the minimum and maximum DMX values for the range. The minimum and maximum values can be the same value if required.

The Auto Palette field indicates whether the range can be used to build Palettes. When a Head has no Palettes specified for a particular channel then it can try and generate them from the range information. Up to 20 Auto Palettes are supported per channel. Set this value to 1 for a specific channel function such as a Cone Gobo on a gobo wheel or a larger value for a graded parameter such as the rotate speed on a Gobo Rotate channel. The sum of all the Auto Palette fields for a particular channel should not exceed 20.

Ranges can be added using the Insert soft button and deleted using the Remove Button (press twice to Remove).

The Icon field is for displaying icons - this will be available in a future software release.

The Dep Chan and Dep Val fields enable ranges to depend on other ranges. This enables ranges to be defined for heads with attributes that change their function depending on the value of another attribute – such as FX parameters that depend on the particular FX chosen. The range is only valid when the dependent channel (Dep Chan) is set to the range specified in the dependent value (Dep val).

To capture the minimum and maximum values from the programmer you must first insert a new range and select the channel number you are interested in. Then using the Group, Position, Colour, Beam, windows in the usual way set the minimum value for the attribute. Back in the Ranges View, move the cursor to the minimum field and then press the Capture Range soft button. In a similar way, set up the maximum value in the programmer, move to the maximum field in the Ranges View, and then press the Capture Range soft button.

Ranges can be imported from a .csv format file using the Import Ranges button. The data should be organised in the .csv file in the same column order as the fields in MagicQ.

<chan>,<name>,<min>,<max>,<auto pal>,<icon>,<dep chan>,<dep val>

## 16.4 Palettes View

This view defines the default palettes that are loaded when the head is patched. Palettes can be set up at any time regardless of whether heads of the type have been patched. The palette data is immediately available for patching new heads. If the head has been patched then you can capture the palette value fields from the programmer.

For each Palettes you specify the type (press Enter to swap between the types), the name and the number of channels that make up the Palette. Then for each channel you specify the channel number and the level for that channel.

Palettes can be added using the Insert soft button and deleted using the Remove Button (press twice to Remove).

The Icon field is for displaying icons - this will be available in a future software release.

To capture the palette value fields from the programmer you must first insert a new palette and configure the channel numbers you are interested in. Then using the Group, Focus, Colour, Beam windows in the usual way set up the palette values. Back in the Palettes View press the Capture Palette soft button.

Palettes can be imported from a .csv format file using the Import Ranges button. The data should be organised in the .csv file in the same column order as the fields in MagicQ.

<palette type>,<name>,<num of chans>,<icon>,<chan 1>,<val 1>,<chan 2>,<val2>,...

## 16.5 Macros View

This view defines the macros that are available to control special features of the head such as turning the lamp on and off and resetting motor channels. Note that programming of macros is an advanced topic and therefore proceed with caution.

Each macro has a name and a number of channels. The macro data consists of fields to specify which channels are used (C1 to C10) and then the macro step data. The macro step data consists of the number of steps followed by data fields.

For each step the data fields consist of a time followed by the level data for the specified channels.

## 17 Using LED fixtures and LED matrix

MagicQ utilises a powerful Cue engine, which enables it to easily handle large numbers of LED heads in the form of panels, battens and moving lights. MagicQ's ability to handle large numbers of heads independently ensures that Lighting Designers get to make the most of their LED arrays without being limited by the console. With MagicQ you can generate complete rainbow washes across all LED fixtures at the touch of a button with immediate live control during playback through encoders and buttons.

MagicQ includes a powerful FX engine designed for use with arrays of LED fixtures. You can design a grid structure based on the layout of the fixtures on the stage and then play back bitmaps and text messages on that grid. The grid can have spaces in it where there are no fixtures allocated to the position in the grid – thus allowing the fixtures to be spread over the grid as they appear on the stage. MagicQ enables LED fixtures to be used in their "high resolution" mode enabling individual control of each LED pixel rather than the restricted modes where Lighting Designers are reliant on the same old in built effects that everyone has seen many times.

MagicQ supports grids of up to 128 pixels wide and up to 128 pixels high. The total number of pixels is only limited by the number of channels on the console.

### 17.1 Patching LED on MagicQ

MagicQ is designed so that it can handle different makes of LED fixture independently. Thus the RGB colours of the fixture are patched as generic RGB fixtures whilst any extra in built fixture FX are patched separately.

It is still possible to patch LED fixtures in their low resolution modes - just choose the correct personality and the fixture will appear like any other fixture. However, if you wish to achieve more, then we recommend taking the time to patch in the higher resolution mode.

The generic led3chan and generic led4chan can be used with most LED fixtures. If MagicQ does not have the required personality in its library then you can easily build your own personality using the in-built Personality Editor.

## 17.2 Using the Grid view in the Outputs Window

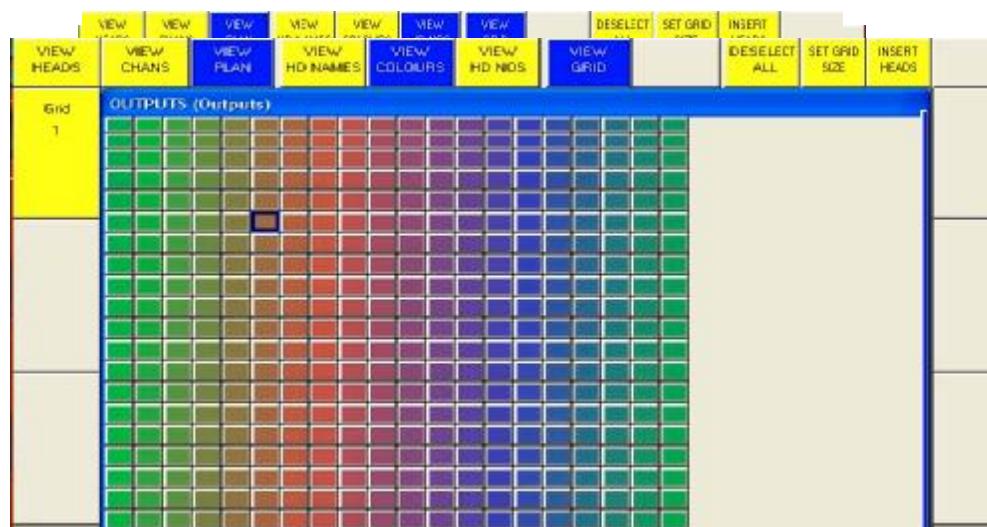
To make the most of your LED fixture you can create a grid containing the LED fixtures and then each fixture becomes a “pixel” in the grid. The MagicQ FX Engine can then be used to play back bitmaps and text on the grid.

After patching your LED fixtures you should set up the head numbers for each fixture in the Patch Window. By default MagicQ numbers heads in the order they are patched starting at 0. Simply edit the head number field in the Patch Window to change the head numbers. Use SHIFT and the cursor keys to set multiple head numbers.

Head type	DMX	Hd no	Name	Grp	P Inv	T Inv	Swap	Merge	From
generic led3chan	4-001 (0000000001)	101	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-004 (0000000100)	102	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-007 (0000001111)	103	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-010 (0000010101)	104	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-013 (0000011011)	105	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-016 (0000000000)	106	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-019 (0000010011)	107	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-022 (0000010110)	108	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-025 (0000011001)	109	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-028 (0000011100)	110	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-031 (0000111111)	111	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-034 (0000100010)	112	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-037 (0001001011)	113	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-040 (0001010100)	114	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-043 (0001010111)	115	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-046 (0001011110)	116	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-049 (0001110001)	117	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-052 (0001101000)	118	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-055 (0001101111)	119	LED3Ch	<input type="radio"/> Mix	no	no	no	None	
generic led3chan	4-058 (0001110101)	120	LED3Ch	<input type="radio"/> Mix	no	no	no	None	

Then in the Outputs Window, Plan View create a grid. First set up the grid size, by pressing the GRID SIZE soft button. Enter the horizontal size followed by the vertical size – e.g. 20/20.

In the Plan View there are three different views, Head Names, Colours and Head Numbers. Press Head Numbers and View Grid to see the grid. Then you can enter the head numbers in the grid according to the layout of the LED fixtures within the matrix / stage. Use SHIFT and the cursor keys to set multiple head numbers in one go.



Once the grid is configured you can then see the Output by pressing the View Colours soft button and the View Grid soft button.

### 17.3 Using text and bitmap FX on Grids

The bitmaps and text are controlled using bitmap layers – each layer is controlled like a normal moving light – i.e. it is patched as a virtual personality (generic bitmap.hed). The personality has channels to select the bitmap or text, channels for X, Y position and size, rotate and master levels for red, green and blue. Multiple layers can be used to mix between the layers using add, subtract, min, max or invert colour mix modes.

First, patch one or more generic bitmaps. Each bitmap layer uses 32 channels from the output channels. Once patched these channels can not be used for controlling real lights. It is best to patch generic bitmap layers to unused universes or to free spaces in the universes you are using.

### 17.4 Setting a base level for the bitmap

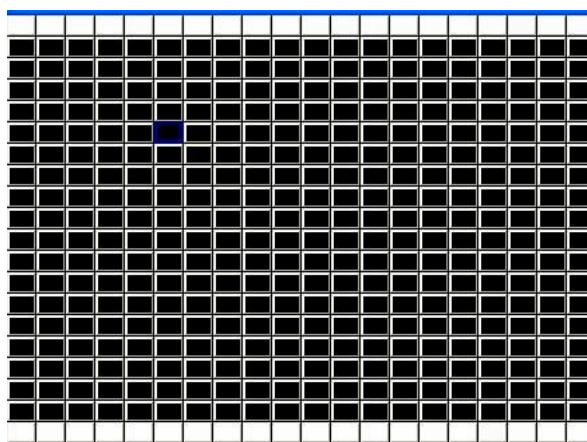
In order to use the bitmap and text FX there must first be a base level set for each of the heads in the grid. Select all of the fixtures and then program a Cue with all of the levels (Blue, Green and Red) at zero level. This Cue must be active on a Playback for the bitmap/text FX to be enabled onto the grid.

The level recorded, will be used as the base level to which the bitmap / text FX is added. Generally it is best to record a base level of zero.

This feature can be used to enable different parts of the grids. Only the parts of the grid that have a base level controlled by an active Playback will output. If you use this as part of a Chase to sequentially output different parts of the grid then make sure you set the “Rel Old Chans” option in the Cue Stack for each of the chase steps.

### 17.5 Using bitmaps

Select the bitmap layer and press LOCATE to set the bitmap layer to its defaults.



The Beam parameters of the Bitmap layer will default to Bitmap Page 1 and Bitmap 1. Use the encoders to select different Bitmaps.

The Bitmap generator contains a library of standard bitmap patterns on Bitmap Page 0. These patterns are automatically sized to the size of your grid.

In addition the user can add their own bitmaps in .bmp or .jpg format into Bitmap Pages 1 to 255. Copy the bitmaps into the bitmaps folder underneath the show folder. The bitmaps should be named bitmap001-001.bmp, bitmap001-002.jpg etc... The first 3 digits are the bitmap page and the second 3 digits the bitmap within the page. Bitmap page 0 is reserved for standard, internally generated bitmap patterns.

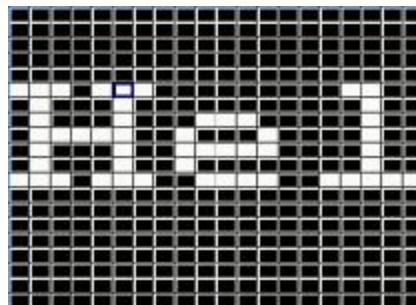
It is best to make user bitmaps the same size as the output grid.

## 17.6 Using text strings

Two text strings can be played back on each layer. The text strings can be positioned at the top, middle or bottom of the grid and can be made to scroll in either horizontal or vertical directions. Text strings can be edited live for real time message applications.

Control text strings from Beam Page 2. Each of the two text strings has a Text Page, a Text, a Text speed and a Text mode.

Using the Text Page and Text encoders select a string that has not been programmed – e.g. Text Page 1, Text 0. Type in new text on the keyboard, press SET and press the soft button associated with the Text attribute. The status window will report “text stored”.



The Text mode determines how the text is displayed , horizontally, vertically, top, bottom or middle. The Text speed determines the speed that the text scrolls across the screen.

Note that Text mode values less than 128 cause the text to be scrolled across the screen with no gap between the start and end of the text. Text mode values greater than 128 cause the text to be scrolled with a gap between the end of the text and the starting of the text again.

The two sets of text controls enable one text string to be scrolled in one direction and another text string to be scrolled in the opposite direction.

## 17.7 Manipulating bitmaps and text

Use the Position attributes of the bitmap layer to make changes to the position of the bitmap / text – set the X or Y position, the X or Y size and the rotation.

You can play back standard FX on the bitmap layer attributes just like you would on a moving head. For example, to scroll a bitmap form left to right, first set the X position to centre (X pos is 128) and then add a Ramp Up to the X pos.

Use the Colour attributes to determine the layers of red, green and blue in the bitmap / text. For LED matrix you may find it is better to use only one colour at a time – for instance, set Red to 255 and Blue and Green to 0.

An iris and a strobe function are also included under the Beam attributes.

### **17.8 Using the MagicQ Matrix Viewer**

The MagicQ PC software package includes the MagicQ Matrix Viewer application, which makes pre-programming of LED FX simple. It can also be used as a useful monitor in situations where the Matrix display is remote from the MagicQ console. The MagicQ Matrix Viewer monitors Art-Net traffic on the network from a MagicQ console or from a PC running MagicQ PC.

To use the MagicQ Matrix Viewer you should copy the show file with the grid that you are using into the c:\Program Files\Chamsys Ltd\MagicQ PC\show folder. Then after starting the MagicQ Matrix Viewer, select File, and select the show file. MagicQ Matrix Viewer reads the grid data from the show file and sets up the Viewer to the same size as the grid.

The grid number and the IP address of the console / MagicQ PC that is controlling the matrix can be set up in the options.

The MagicQ Matrix Viewer has an option to make the window always on top of other windows – useful when using it on the same PC as MagicQ PC.

### **17.9 Programming LED using standard FX**

To program LED fixtures using standard FX rather than the bitmap layers, just select the fixtures and program them like moving lights.

Select the group of LED fixtures, e.g. "All Pixeline", set the master intensities using the encoders or by pressing the DIM @ FULL soft button in the group window.

You can select standard in-built FX for LED fixtures in the Beam window.

To program colour chases across all patched RGB pixels select all the RGB heads and then in the Colour Window select your base colour, e.g. Red at 128, Green at 128, Blue at 128. Then play back an FX on the head such as rgb, cmy or pulse4steps. Speed and size are controlled as normal.

### **17.10 Making groups out of LED pixels**

To get the best out of a large array of pixel heads it is best to make groups. Select all the RGB pixels for a particular fixture and record it as a group. The order in which you select the heads determines the order that FX are played back on them. You can reverse the selection of an entire group by pressing the top right soft button.

If you have set up a Grid View then you can easily select the pixel heads from this View before recording the group in the Group Window.

The Output window, Plan View includes a soft button "Auto Groups" for automatically generating groups based on the grid design. This generates groups with heads ordered horizontally, vertically, from the sides, from top and bottom, and from the centre.

To get a colour rainbow to roll seamlessly across a line of led battens you may need to reverse the selection of the individual groups - it depends which way you numbered your LED fixtures.

The MagicQ console and MagicQ PC software supports the use of a serial port for controlling external devices, such as CD or DVD players, video or automation computers.

## 18 External Interfaces

### 18.1 Serial port communication

The serial port can also be used to remote control the MagicQ console or MagicQ PC software via a simple set of text commands.

A standard male 9 pin D type connector is provided on MagicQ consoles. On MagicQ PC the availability of a serial port will depend on the PC. Many modern laptops do not have a serial port – however, USB to serial converters are readily available.

MagicQ supports standard baud rates, stop bits and parity options for serial communication.

The pin out is: Pin 2 RX, Pin 3 TX, Pin 5 GND. Note that on MagicQ consoles manufactured before April 2006, there is a non standard wiring of the RS232 port. An adaptor is required to connect to standard serial cables. In these consoles the following connections are made on the 9 way D type connector: Pin 1 GND, Pin 3 TX, PIN 4 RX.

Note that the use of the serial port on MagicQ PC is only enabled when it is connected to a MagicQ PC Wing.

#### 18.1.1 Writing to the serial port

Commands are transmitted from the serial port by placing the command in the Macro field of the Cue Stack window.

The format of serial commands is X followed by the data. To send serial data, the X command must be the only macro command in the macro field. The X command is followed by ASCII data contained within “ “ or ‘ ‘ or by decimal values separated by commas. For example to send Hello World followed by a carriage return:

X”Hello World”,10,13

To send the binary data stream 00 01 02 03 04

X0,1,2,3,4

To send text only:

X”abcdef”

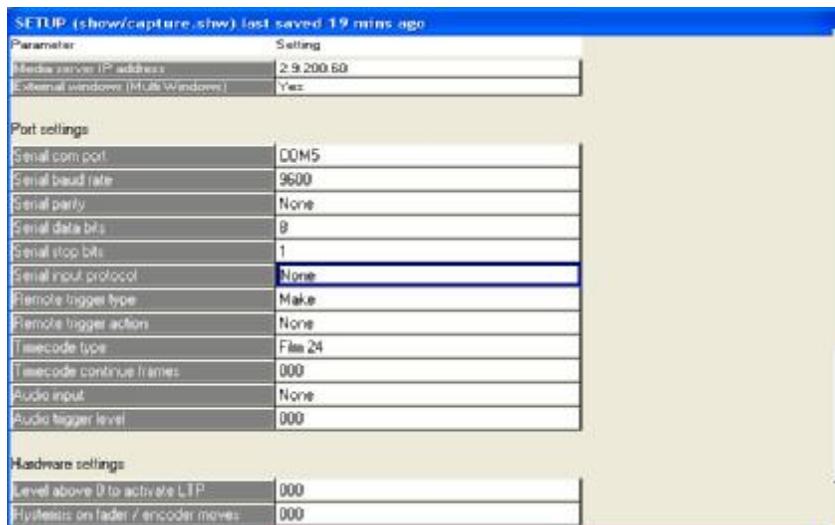
To send several lines of text:

X”Hello”,10,13,”World”,10,13

### 18.1.2 Enabling the serial port

Enable the serial port in the View Settings view of the Setup Window. Page down to the Port Settings. Select the COM port that you wish to use (on the console always select COM1). Set the baud rate, polarity, data bits and stop bits.

### 18.1.3 Reading from the serial port



By default data received on the serial port is ignored. This can be changed to make MagicQ accept remote commands received on the serial port. In the View Settings view of the Setup Window, set the Serial Remote Protocol to “ChamSys Serial Remote (receive)”.

ChamSys Serial Remote protocol consists of simple commands consisting of a list parameter values separated by commas ‘,’ and ending in a character A to Z (or a to z). Commands can contain spaces, tabs, and carriage returns; they are all ignored.

The commands are:

<playback number> A	Activate playback
<playback number> R	Release playback
<playback number> T	Test playback (activate with level 100%)
<playback number> U	Un-test playback (release with level 0%)
<playback number> G	Go on playback
<playback number> S	Stop (go back) on playback
<playback number> B	Fast back on playback (no fade)
<playback number> F	Fast forward on playback (no fade)
<playback number> , <level> L	Set playback fader level
<playback number> , <cue id> , <cue id dec> J	Jump to Cue Id on playback
<page number> P	Change page
<channel number> , <level> I	Set intensity channel to level
<program command number> H	Remote programming command

The following parameter values are supported

<playback number> is a number between 1 and 10

<level> is an integer between 0 and 100.

<page number> is an integer between 0 and 100

<channel number> is an integer between 1 and 6144  
 <cue id> is an integer between 1 and 65536  
 <cue id dec> is an integer between 0 and 99

So for example, to set dimmer channel 4 to 50% you would use:

4,50I

To jump to Cue id 2.5 on playback 8 you would use:

8,2,5J

Commands can be sent back to back – e.g.

1A2A1S2G3,4I

#### 18.1.4 Remote programming commands

Remote programming commands enable simple programming actions to be carried out from a remote terminal. Remote programming commands consist of the program command number followed by parameters and completed with an “H”.

The commands are:

<01> , <start head> , [<end head>] H	Select one or more heads
<02> , <start head> , [<end head>] H	Deselect one or more heads
<03> H	Deselect all heads
<04> , <group number> H	Select group
<05> , <level> , [<time>] H	Set intensity of selected heads
<06> , <attribute number> , <value> , [<time>] H	Set attribute value of selected heads
<07> , <attribute number> , <value> , [<16bit>] H	Increase attribute of selected heads
<08> , <attribute number> , <value> , [<16bit>] H	Decrease attribute of selected heads
<09> H	Clear programmer
<10> , <palette id> H	Include position palette
<11> , <palette id> H	Include colour palette
<12> , <palette id> H	Include beam palette
<13> , <cue id> H	Include cue
<19> H	Update
<20> , <palette id> H	Record position palette
<21> , <palette id> H	Record colour palette
<22> , <palette id> H	Record beam palette
<23> , <cue id> H	Record cue
<30> H	Next head
<31> H	Previous head
<32> H	All heads
<40> H	Locate
<41> H	Lamp on
<42> H	Lamp off
<43> H	Reset

[] indicates an optional parameter

<level> is an integer between 0 and 100  
<palette id> is an integer between 1 and 1024  
<cue id> is an integer between 1 and 5000  
<16 bit> is a flag. 0 for change in 8 bit resolution, 1 for change in 16 bit resolution  
<time> is an integer time in seconds  
<group number> is an integer between 1 and 200  
<start head> and <end head> are integers between 1 and 6145

## 18.2 Remote Ethernet communication

It is possible to remote control MagicQ PC or MagicQ consoles over Ethernet. The same suite of commands that is supported for serial communications is also available for control over Ethernet. The commands are carried using the UDP/IP protocol in Ethernet packets. Communication is broadcast and uses UDP/IP port 6553.

Note that the use of remote Ethernet communication on MagicQ PC is only enabled when it is connected to a MagicQ PC Wing.

### 18.2.1 Transmitting on the Ethernet

Commands can be transmitted by placing the command in the Macro field of the Cue Stack window.

The format of serial commands is Y followed by the data. To send Ethernet data, the Y command must be the only macro command in the macro field. The Y command is followed by ASCII data contained within “ “ or ‘ ‘ or by decimal values separated by commas. For example to send Hello World followed by a carriage return:

Y”Hello World”,10,13

The commands are the same as for serial port communication except that they commence with Y instead of X.

### 18.2.2 Reading from the Ethernet

By default data received on the Ethernet is ignored. This can be changed to make MagicQ accept remote commands received on the Ethernet port. In the View Settings view of the Setup Window, set the Ethernet Remote Protocol to “ChamSys Ethernet Remote (receive)”.

The ChamSys Ethernet Remote protocol consists of simple commands consisting of a list parameter values separated by commas ‘,’ and ending in a character A to Z (or a to z). Commands can contain spaces, tabs, and carriage returns; they are all ignored.

The commands are the same as for the ChamSys Serial Remote protocol above.

## 18.3 Remote trigger input

The MagicQ PC Wing supports a remote input on the rear panel, which can be used to trigger functions in MagicQ from an external control device or switch. The remote trigger can be used to trigger Cues in Cues Stacks, to flash playbacks, as a master GO button, or as a ADD/SWAP selector.

The remote input is provided on a standard 5 pin 180 degree DIN connector.

The connections are (in the sequence they appear physically on the connector)

- 3      0V and equipment ground
- 5      Opto isolated input positive
- 2      Power supply positive (5 Volt, current limited)
- 4      Opto isolated input negative
- 1      0V and equipment ground (same as pin 3)

The remote input can be used to receive an external signal on the opto isolated inputs, or it can be wired to an external switch. To receive an external signal wire the signal + to pin 5 and the signal – to pin 4. When used as external optically isolated input the maximum continuous voltage rating is 24V DC.

When wiring to an external switch links pins 4 and 1. Then connect the external switch between pins 2 and 5.

Remote input hardware is provided on MagicQ consoles; the software to drive it will be enabled in a future release.

#### 18.3.1 Enabling the remote input in MagicQ

In the View Settings view in the Setup Window page down to the Port Settings. Set up the remote trigger type and remote trigger action.

The remote trigger type can be set to NONE, MAKE, or BREAK, depending on whether your external switch is a push to make or a push to break switch. When using an external signal, setting the type to make will cause a trigger when the voltage differential is positive.

The remote trigger action, determines what action is taken by MagicQ when the remote input signal is detected. The options are:

- NONE
- CURRENT PLAYBACK GO
- CURRENT PLAYBACK FLASH
- ADD/SWAP
- SWAP
- DBO
- WING1 PB1 GO
- WING1 PB1 FLASH

When set to NONE there is no special action associated with pressing the remote input. However, the remote input can still be used in Cue Stacks to trigger specific cues by setting the Halt Field in the Cue Stack to REMOTE. The Cue will then wait till the remote trigger is detected before starting to execute the Cue.

When set to SWAP, playbacks are set to SWAP mode whenever the remote signal is detected – this can therefore be used with a foot-switch to temporarily engage SWAP mode.

WING1 PB1 GO and WING1 PB1 FLASH are provided as an alternative to the current playback GO and FLASH. This allows, for example, a smoke machine to be set up on WING1 PB1 trigger by the remote input.

## 18.4 Sound to light (audio input)

Sound to light operation is supported on MagicQ PC when connected to a MagicQ PC Wing.

In the Setup Window set the Audio Input to “Sound to Light”. Set the Audio Trigger Level to the level of the music between 0 and 255.

Sound to light can be used in two ways; to bump a Cue Stack from step to step, and to set the virtual level of the playback fader. Configure the “Audio Controls Fader Level” and the “Audio bumps GO” in the View Options view of the Cue Stack window.

When used to control the fader level, the fader can be configured to control HTP level, LTP level, FX size or FX speed thus giving many possible sound activated FX.

# 19 Using Multiple Consoles

## 19.1 Hot take-over

Hot take-over allows the use of multiple consoles in case a console stops working. Hot take-over can be used in two ways - depending on what you wish to happen when the main console becomes available again.

In “Single mode” only one of the consoles (or MagicQ PCs) on the network is designated as a back up. All the universes on the console are set to “Hot take-over”. Whenever there is no ArtNet traffic on the network for a particular universe, the back-up console starts sending data for that universe. As soon as data reappears, the back-up console stops sending data.

In “Multiple mode” all consoles on the network are set to “Hot take-over”. At any one time, one of the consoles will run as the master, with all universes enabled. If that console fails, one of the others will take over. It is recommended that you set the “Hot take-over detect time” to different values on each of the consoles to avoid conflict conditions.

A console that is set to “Hot take-over” can be forced to control all universes using the “TAKE CONTROL” soft button. This will force an immediate change of control from one console to the other.

Similarly, control can be given to another console using the “RELEASE CONTROL” soft button. This will force the other console to take control, and depending on the hot take-over options will enable a controlled fade to the new console outputs.

Set up the type of hot take-over, the detect time, and the fade time in the View Settings view of the Setup Window. Set up the universes to be controlled by hot take-over in the View DMX I/O view of the Setup Window.

Universes that are set to “Hot take-over”, monitor the network for ArtNet traffic on that universe. If no ArtNet traffic is detected for longer than the “Hot take-over detect time” then the universe will be

automatically enabled. When ArtNet traffic is again detected on the network (from another console) the universe is automatically disabled immediately.

## 19.2 Playback synchronisation between consoles

It is possible to carry out basic synchronisation of two or more consoles during playback by using the ChamSys Remote protocol – either via serial or Ethernet. Synchronisation can be set for individual playbacks, or for all 10 main playbacks. When the playbacks faders are raised, playbacks Go, Back or Jump are pressed, the master console sends ChamSys Remote Protocol commands to the slave consoles.

On the master unit set Remote Ethernet Protocol to Chamsys Rem (tx) and on the slave units set Remote Ethernet Protocol to Chamsys Rem (rx).

For individual playbacks set the Cue Stack option “Send playback state to other consoles”. For all main playbacks, set the Setup option “Send playback state to other consoles”.

The Setup option “Send playback state to other consoles” has four options:

None:	No synchronisation information is sent
Playback	Playback info only
Swap DBO	Swap, DBO info only
Playbacks, Swap, DBO	Playback, Swap and DBO info

Thus consoles can be set to track the playback exactly or just to honour DBO and Swap status. This means that, for example, when using two consoles, one for generic lights and one intelligent lights – pressing a Swap button on one console will affect both consoles.

It is possible to synchronise with other (non MagicQ) consoles or external computers that support ChamSys Remote Ethernet Protocol.

Synchronisation on MagicQ PC is only available when connected to a MagicQ PC Wing.

## 19.3 Grabbing shows from other consoles

It is possible to grab a show that is running on another console onto the current console. Press the Grab Show soft button in the View DMX I/O view of the Setup Window. Choose which console you wish to grab a show from. The show is copied from the other console to the show folder on this console, and the show is loaded into memory.

## 19.4 Automatic backing up of shows from other consoles

It is possible to set a MagicQ console or a MagicQ PC to automatically back up show files from one or more other consoles on the network. Optionally, this console can be made to automatically run one of the shows.

In the Setup Window configure the “Auto Load Show From Other Consoles” option.

When set to “Auto copy show”, MagicQ periodically checks for other consoles on the network and grabs the show files that are running on those consoles. The show files are stored in the normal show folder.

When this feature is used to back-up multiple consoles, it is important that different show file names are used on each of the other consoles – otherwise files from different consoles will overwrite each other on the back-up console.

Note that files will only be copied from consoles that have the “auto backup” option set to “yes” or “on changes”. Files will not be copied from consoles that do not have this set (e.g. when the playback mode is set to “Safe”). This avoids any performance impact from copying of files from live consoles.

When set to “Auto copy and run show” MagicQ copies the files as above. It then load one of the shows that it has copied. If there are multiple consoles on the network then it will always run the show file from the same console.

This feature can be used to back up show files from PCs running MagicQ PC as well as from consoles – these PCs must have the drive where MagicQ is installed shared on the network (e.g. share C: as C).

## 20 Execute Window

The Execute Window is a special window designed to allow the user to customise the look and feel of the MagicQ. This layout of the window is configurable by the user and can contain Groups, Palettes, Macros, Cues and Cue Stacks.

### 20.1 Design View

The user simply specifies a grid of buttons (using the Set Grid Size soft button) and then copies the relevant items from other windows. For example, to place a Group in the Execute Window; go to the Group Window, press Copy, select the Group, and then go to the Execute Window and select the box to place the Group.

Multiple items can be selected for copying into the Execute Window.

There are two modes, View Design and View Execute. Use View Design to design the grid size and to place items in the grid. Use View Execute for playback.

You can also assign Special Functions to items in the Execute grid. These include Execute Page Up, Execute Page Down, Close, Blind and Clear. Press the ASSIGN SPECIAL soft button.

### 20.2 Full Screen View

The Execute Window can be run in full-screen mode, thus allowing the whole of the screen to be customised. Selecting the “Run in Execute Window” option in the Setup Window ensures that the console / MagicQ PC will start up in the Execute Window. Note that on MagicQ PC, the buttons on the full screen Execute Window will only work when a MagicQ PC Wing is connected. The size of the full screen Execute Window can be set via the Set Win Size button – this defaults to 1024 by 768 for MagicQ PC and 800 by 600 for the console.

It is possible to protect the Execute Window such that operators only see the Execute Window and can not use the main MagicQ application windows. From the Execute Window set up a password using the Set Password soft button. If an operator tries to close the window then they have the choice of shutting down or entering the password to re-enter the main MagicQ application windows.

For security reasons there is not a master password. To reset the password on a console or MagicQ PC system that is locked, please contact your local dealer.

## 21 Media Servers

MagicQ has extremely powerful support for media servers. It is possible to connect to up to 50 different media servers or intelligent media yokes each with different media content. MagicQ downloads thumbnail previews for the media content from each media server independently.

MagicQ supports a special window, solely for controlling media servers, the Media Window. This window makes it much easier to control media servers. You can select media server, media layer, attributes and media content all from the same window. You can also see what content is selected on each of the layers of the selected media server. Open the Media Window by using the 5<sup>th</sup> Spare button – above the Macro button.

In addition, there is a Live Preview window, which shows the output of the media server, or the output of each of the layers. This is transferred in real time from the media server – so that you can see exactly what the media server is playing. This is particularly useful in situations with many media servers, or media servers that are remote from the control position.

### 21.1 Configuring a media server

First patch the media server using the normal MagicQ Patch Window. Each media server should have unique head numbers.

In the Setup Window, Media View configure the media server parameters.

Set the IP address of the media server. This will be used to locate the media server on the network and to retrieve thumbnails and live previews.

Optionally set up a name for the media server. This may help you to distinguish the different media servers.

Select the type of media server,

Set the number of layers you have patched – this is the number of media layers, and does not include master layers, soft edge or camera layers.

Set the head number of the first media layer. This tells MagicQ which patched layer is the first media layer on the media server. MagicQ expects layers to be sequential head numbers, e.g. set your head numbers for your layers to 101 to 108.

### 21.2 Thumbnail view

MagicQ retrieves thumbnails from the media server and shows them on the screen for easy selection of media banks and media images. The media server must be enabled in the Setup Window, Media View for it to retrieve thumbnails. MagicQ can handle different media on each media server thus making it easy to program larger configurations of media servers.

MagicQ retrieves thumbnails when a media bank is selected for the first time, or when the media has been changed by the media server. MagicQ caches the thumbnails on its hard drive. You may need to change to a bank a few times before all the thumbnails for that bank have been downloaded.

Alternatively, use the RELOAD THUMBS soft buttons to reload all the thumbs for the current media bank.

To force a reload of all the media from the media server, move the cursor to the required media server in the Media View of the Setup Window and press the ERASE CACHE soft button.

The media thumbnails are also shown in the top 8 preview windows to indicate which media is selected on each layer.

### **21.3 Live previews**

MagicQ can connect to a media server to retrieve a live preview of the master output or of the individual layers. This is very useful where the media server is remote to the console, or in a multiple media server configuration.

Enable the Live Preview option in the Media View of the Setup Window.

The live preview is shown in the large window on the left of the Media Window. Choose using the top soft buttons whether the preview shows the output, or the currently selected layer.

When connected to media servers that do not yet support live previews, the preview window will show the image thumbnail from the 1<sup>st</sup> layer that has its intensity channel above zero.

### **21.4 Media layer selection**

The Media Window provides buttons to directly access up to 8 media servers each with 8 layers – larger numbers of media servers and layers can be selected direct from the keypad using the head number of the layer.

Multiple servers and multiple layers can be selected using SHIFT and selecting the servers/layers.

### **21.5 Copying and moving between layers**

When programming media servers it is often necessary to copy or move programming between layers or servers. Simply select the source server/layers then press COPY or MOVE and then select the destination server/layers.

When programmed data is moved from one layer to another, the source layer is returned to the default layer values.

An individual layer can be cleared by selecting the layer and pressing the CLEAR SELECTED button.

### **21.6 Thumbnails and live previews on a Hippotizer**

To get thumbnails on a Hippotizer ensure that the Hippotizer is configured with a user account vj with password vj. The media folders on the Hippotizer must be shared along with the root directory. Share the root of the C drive as C. If you are using the “Stage” version of the Hippotizer then you must also share the root of the D drive as D.

To get live previews on a Hippotizer ensure the TCP/IP service is running.

## **21.7 Thumbnails and live previews on Arkaos**

Arkaos supports thumbnails from Arkaos v3.5 and live previews from Arkaos v3.6. On 3.5 set the type to “Arkaos”. On 3.6 set the type to “CITP MSEX”. The data is transferred using TCP/IP, so it is important to set up the IP address in the Media Server Window on MagicQ correctly. Use the IP address of the Arkaos Server as set in the Windows/Mac network properties of the Arkaos PC.

No special configuration is required on the Arkaos server to receive thumbnails and previews.

## **21.8 Media Servers on MagicQ software prior to v1.2.5.4**

On older MagicQ software the media settings were configured in the Setup Window.

For a typical Green Hippo Hippotizer system:

Media server mount path: 2.9.200.1/C

Media server index path: hippotizerv2/MediaMaps/mediamap.xml

Media server IP address:

For a typical Arkaos system:

Media server mount path:

Media server index path: thumbs/arkaos.csv

Media server IP address: 2.9.200.1

## 22 The MagicQ At A Glance

Start up	Power up the console - press ON button on the back.
Erase show	SETUP, ERASE SHOW, select YES, select NORMAL.
Turn on console output	SETUP, VIEW DMX I/O, enable required universes
Patch a dimmer	PATCH, CHOOSE DIMMER, PATCH IT.
Patch multiple dimmers	PATCH, CHOOSE DIMMER, PATCH IT, enter number of dimmers.
Patch a head	PATCH, CHOOSE HEAD, PATCH IT.
Patch multiple heads	PATCH, CHOOSE DIMMER, PATCH IT, enter number of heads.
Select a group	GROUP, select the group or 1 ** selects Group 1
Select heads	GROUP, VIEW HEADS, hold SHIFT and press ENTER to select each head
Select heads using keypad	1 THRU 4 @@
Set intensity for heads 1 to 4.	1 THRU 4 @ FULL
Lamp on entire rig	MACRO, LAMP ON ALL
Modify attributes (types)	Choose COLOUR, BEAM or POSITION. Use encoders or palettes.
Add a FX	PROG, ADD FX, select the FX
Record a Palette	Choose COLOUR, BEAM or POSITION. RECORD, select the palette entry.
Record a Cue	RECORD, SELECT button for the playback.
Record a Chase	RECORD, SELECT button for the playback. Repeat for each step.
Modify a Chase	Hold the SELECT button for the playback and use the encoders and buttons to change speed / contrast / direction.
Save show	SETUP, SAVE
Shut down	SETUP, QUIT

## 23 Troubleshooting

### 23.1 No outputs

Check whether the console is operating correctly by opening the Outputs Window and looking at the channel data. If channels are not at their correct levels then check:

- Are the Grand Master and Playback Master faders up?
- Are Playback faders raised?
- Is there channel data recorded in the Cues on the playbacks?
- Is BLIND mode on?
- Heads and dimmers are patched to the correct universe?

If the Outputs Window shows correct values then check the Outputs are configured and enabled correctly in the View DMX I/O view of the Setup Window. If you are using an Ethernet convertor box check that it is receiving data correctly. Check:

- Outputs are configured correctly
- Outputs are enabled
- TCP/IP address and network address are configured correctly
- Ethernet box is powered up and connected to the console correctly
- Ethernet box is configured correctly

### 23.2 Console not responding

Is the time changing in the status window - if so then the console is running o.k. Check

- Master faders up
- Correct playback pages selected
- Playback has a Cue stored on it
- The console is not locked (CTRL top left soft button)
- Is button test mode on (hold top left SHIFT button and press top right SHIFT button)

### 23.3 Strange key presses, unexpected window changes

Enter board test mode to determine the cause of the fault (hold top left SHIFT button and press top right SHIFT button)

- Check a button has not become stuck down
- Check nothing / no-one is leaning on the keyboard or other buttons

## 24 Button Functions

### Shift

The shift buttons are used to select alternative functions for buttons and faders. There are three shift buttons on the console – one at the top of each side of the touch-screen. The third is in the row of action buttons above the keypad.

The shift keys on external keyboards also have the same function.

### Ctrl

The ctrl buttons are used to select alternative functions for buttons and faders. There are two shift buttons on the console – at the top corners of the touchscreen.

Alternative functions include selecting views and making adjustments to the [display and console light brightness](#).

The ctrl keys on external keyboards also have the same function.

### Min

Used to minimise a window. Windows appear in the [windows section](#) of the screen.

### Max

Used to maximise a window. Windows appear in the [windows section](#) of the screen. A maximised window is sized to the complete main window area. The buttons around the edge of the screen and the status screen continue to be displayed.

### Close

Used to close a window. Windows appear in the [windows section](#) of the screen. Pressing SHIFT and CLOSE causes all open windows to be closed.

### Next Win

This button allows the user to select the active window from the currently open windows. The order of window selection is fixed, so that windows appear in a memorable sequence regardless of the order the windows were opened. Each press of the Next Win button selects the next window in the open window list.

Windows appear in the [windows section](#) of the screen.

### Prev Win

This button allows the user to select the active window from the currently open windows. The order of window selection is fixed, so that windows appear in a memorable sequence regardless of the order the

windows were opened. Each press of the Prev Win button selects the previous window in the open window list.

Windows appear in the [windows section](#) of the screen.

### Size

This button is used to modify the size and position of the active window on the screen. Windows appear in the [windows section](#) of the screen. There are 9 possible combinations of window size and position. The initial size is the maximised size – i.e. the window takes up the whole of the window display area.

There are four possible half screen positions and 4 possible quarter screen positions. Each press of the size button modifies the window to the next combination. After the final combination the window reverts to the first (maximised) size.

### Prog

This is a Window select button. Pressing this button makes the Programmer Window the active window. If the window was not open, then the window is opened.

The Programmer Window is used to view and modify the contents of the [programmer](#). The Window supports three different views; [channel levels](#), [timings](#) and [FX](#).

Pressing and holding the Programmer button causes the Programmer Window to be temporarily made the active window until the button is released.

### Outputs

This is a Window select button. Pressing this button makes the Outputs Window the active window. If the window was not open, then the window is opened.

The Outputs Window enables the user to view the output channels in many different ways including level data, intensities, movement, plan and colour display. It also allows input channels to be viewed.

In View Heads, the outputs are viewed by head enabling the operator to easily see the levels of different parameters.

In View Chans, there are two further options, View Int and View DMX. View Int shows all the intensity levels of patched channels and their current level in percentage – i.e. a traditional theatre output screen.

View DMX shows the actual data being transmitted out / or received into the console. In View DMX, patched channels are shown in Red (HTP) or yellow (LTP). Page Up and Page Down can be used to find the required channels – alternatively use the [Universe](#) soft button to jump back or forwards an entire universe.

In View Plan, a plan of the lighting rig can be created and then used to easily identify the levels of different lamps according to their position in the lighting rig.

Pressing and holding the Outputs button causes the Outputs Window to be temporarily made the active window until the button is released.

### Setup

This is a Window select button. Pressing this button makes the Setup Window the active window. If the window was not open, then the window is opened.

The Setup Window is used to perform major operations on show data such as [loading](#), [saving](#) and [erasing](#) shows. It is also used to configure console [settings and preferences](#).

The Setup Window has three views, SETTINGS, SYSTEM and DMX I/O.

Pressing and holding the Control button causes the Setup Window to be temporarily made the active window until the button is released.

### **Patch**

This is a Window select button. Pressing this button makes the Patch Window the active window. If the window was not open, then the window is opened.

The Patch Window is used to patch dimmers and intelligent heads onto the console channels. It has two different views, DMX for examining individual DMX channels and HEADS for configuring dimmers and intelligent heads. See [Patching](#) for more details.

Pressing and holding the Patch button causes the Patch Window to be temporarily made the active window until the button is released.

### **Macro**

This is a Window select button. Pressing this button makes the Macro Window the active window. If the window was not open, then the window is opened.

The Macro Window allows the user to record and playback keyboard macros thus enabling them to customise buttons to perform actions unique to their own style of operation.

The Macro Window is currently under testing and is therefore not available. It will be made available in one of the next software releases.

Pressing and holding the Macro button causes the Macro Window to be temporarily made the active window until the button is released.

### **Help**

This is a Window select button. Pressing this button makes the Help Window the active window. If the window was not open, then the window is opened.

The Help Window enables the manual to be viewed on-line on the console. The Help Window supports hyperlinks, searching, and quick links.

Hyperlinks are shown underlined – press the text on the touch screen to jump to the hyperlink.

To find information on a particular button on the console, press and hold down the Help button and then press the button you wish to get help on. On the MagicQ PC version, press the BUTTON HELP soft button and then press the required button.

Pressing and holding the Help button causes the Help Window to be temporarily made the active window until the button is released.

## Page

This is a Window select button. Pressing this button makes the Page Window the active window. If the window was not open, then the window is opened.

The Page Window is used to select which page of [Playbacks](#) is currently in use. Selecting of Pages can also be done using the [Page Select](#) buttons. The Page Window also provides a means for [naming](#) Pages.

Pressing and holding the Page button causes the Page Window to be temporarily made the active window until the button is released.

## Playbacks

This is a Window select button. Pressing this button makes the Playbacks Window the active window. If the window was not open, then the window is opened.

The [Playbacks Window](#) is used to manage the allocation of Cue Stacks to [Playbacks](#). Cue Stacks can be recorded, named, removed, moved, and copied between Playbacks.

Pressing and holding the Playbacks button causes the Playbacks Window to be temporarily made the active window until the button is released.

## Cue

This is a Window select button. Pressing this button makes the Cue Window the active window. If the window was not open, then the window is opened.

The Cue Window is used to view and modify the contents of a [Cue](#).

Also see [Recording a Cue](#).

Pressing and holding the Cue button causes the Cue Window to be temporarily made the active window until the button is released.

## Cue Stack

This is a Window select button. Pressing this button makes the Cue Stack Window the active window. If the window was not open, then the window is opened.

The [Cue Stack Window](#) is used to manage the steps in a [Cue Stack](#). Steps can be recorded, named and removed. Cue timings and settings can also be configured.

Also see recording of [Cue Stacks](#).

Pressing and holding the Cue Stack button causes the Cue Stack Window to be temporarily made the active window until the button is released.

## Stack Store

This is a Window select button. Pressing this button makes the Stack Store Window the active window. If the window was not open, then the window is opened.

The [Stack Store Window](#) is used to view all of the [Cue Stacks](#) stored on the console. Cue Stacks can be recorded, named, removed, moved and copied.

Pressing and holding the Stack Store button causes the Stack Store Window to be temporarily made the active window until the button is released.

### **Cue Store**

This is a Window select button. Pressing this button makes the Cue Store Window the active window. If the window was not open, then the window is opened.

The [Cue Store Window](#) is used to view all of the [Cues](#) stored on the console. Cues can be recorded, named, removed, moved and copied.

Pressing and holding the Cue Store button causes the Cue Store Window to be temporarily made the active window until the button is released.

### **Group**

This is a Window select button. Pressing this button makes the Group Window the active window. If the window was not open, then the window is opened.

The Group Window is used to [select heads](#). Selected heads can then be [modified](#) in the Intensity, Position, Colour, and Beam Windows. The Window supports selecting of heads individually or by group.

Pressing and holding the Group button causes the Group Window to be temporarily made the active window until the button is released.

### **Intensity**

This is a Window select button. Pressing this button makes the Intensity Window the active window. If the window was not open, then the window is opened.

The [Intensity Window](#) is used to set the level of dimmer channels and the intensity attributes of intelligent heads. The Window supports two views, [Programmer](#) and [Preset](#).

Pressing and holding the Intensity button causes the Intensity Window to be temporarily made the active window until the button is released.

### **FX (was ATTR)**

This is a Window select button. Pressing this button makes the FX window the active window. If the window was not open, then the window is opened. In older versions of software this button was named the ATTR button and opened the Attribute Window. The Attribute Window can still be opened using the CTRL and ATTR.

The FX window enables FX to be applied to the currently selected heads. If no heads are currently selected then the Group Window is opened to enable selection of heads.

The Attribute Window is used to set the attributes of intelligent heads using the [Attribute Bank](#) method – as opposed to using the [Attribute Type](#) (Intensity, Pos, Colour, Beam) method. With attribute banks each attribute can be modified individually.

The Attribute Window is also used to run [head macros](#).

Pressing and holding the Attribute button causes the Attribute Window to be temporarily made the active window until the button is released.

### **Pos**

This is a Window select button. Pressing this button makes the Pos Window the active window. If the window was not open, then the window is opened.

The Pos Window is used to set the pan and tilt attributes of intelligent heads using the [Attribute Type](#) method. The Pos Window also displays and allows selection of Palette entries from the [Position Palette](#).

It also supports the [Flip](#) function for moving heads.

Pressing and holding the Pos button causes the Pos Window to be temporarily made the active window until the button is released.

### **Colour**

This is a Window select button. Pressing this button makes the Colour Window the active window. If the window was not open, then the window is opened.

The Colour Window is used to set the colour attributes of intelligent heads using the [Attribute Type](#) method. The Colour Window also displays and allows selection of Palette entries from the [Colour Palette](#).

Pressing and holding the Colour button causes the Colour Window to be temporarily made the active window until the button is released.

### **Beam**

This is a Window select button. Pressing this button makes the Beam Window the active window. If the window was not open, then the window is opened.

The Beam Window is used to set the colour attributes of intelligent heads using the [Attribute Type](#) method. The Beam Window also displays and allows selection of Palette entries from the [Beam Palette](#).

Pressing and holding the Beam button causes the Beam Window to be temporarily made the active window until the button is released.

### **Next Head**

Used to select the next head from the currently selected heads. See [selecting individual heads](#).

### **Prev Head**

Used to select the previous head from the currently selected heads. See [selecting individual heads](#).

### **Locate**

Pressing LOCATE, [locates](#) all the selected heads.

## Fan

Used to enter [Fan Mode](#). Fan mode enables adjustments to a number of selected heads to be applied in a non-linear fashion.

Pressing and holding Fan enables Fan mode to be entered temporarily. Make your changes and then release the Fan button.

## Highlight

Used to enter [Highlight Mode](#). Highlight mode enables adjustments to individual heads from the currently selected heads. The individual head is highlighted whilst the others are made less bright.

## Single

Used to enter [Single Mode](#). Single mode enables adjustments to individual heads from the currently selected heads. Similar to [Highlight Mode](#) but the head under adjustment is not highlighted.

## All

Used to return control to all selected heads. Pressing ALL in [Single Mode](#), [Highlight Mode](#) or [Odd/Even Mode](#) exits the mode.

See [All](#).

## Odd / Even

Used to enter [Odd/Even Mode](#). Odd/Even mode gives control to the odd or even heads from the currently selected heads.

## Select

Used to select a playback as the [current playback](#). Provides a means of selecting playbacks when slaving other consoles to the MagicQ where the other console does not have separate flash and select buttons.

Also used to select playbacks that have been activated through the Playbacks Window as the current playback.

## Release

The Release button is used to Release a playback – i.e. to make it inactive. By default Cue Stacks are configured so that they release automatically when the fader is brought back to zero. However Cue Stacks can be configured to require a manual release. See [activating and releasing playbacks](#).

## Blind

Used to enter [Blind Mode](#). Blind mode stops the contents of the programmer from affecting the output channels of the console.

## Clear

Used to clear the [programmer](#).

## Backspace

Used to remove the last character from the input.

If there is no input then it cancels any outstanding actions such as recording, naming, removing, moving or copying.

## Set

An [action](#) button for setting show data.

Used to [name playbacks](#) and other [items](#). Also used to [set the values of items](#) such as parameters.

## Record

An [action](#) button for recording show data.

Used to [record Cues onto playbacks](#) and to [record Groups](#), and to [record Palettes](#)

See also [Recording a Cue](#).

## Remove

An [action button](#) for removing show data.

Used to [remove Cue Stacks from Playbacks](#), and to [remove other items](#).

## Undo (was Assign)

The Undo button allows the last few changes in the programmer to be undone. Press SHIFT and Undo to redo a change. The Undo functionality is enable in the Setup Window, Settings View.

The Assign button is no longer supported – the function is instead provided by the Move and Copy buttons - see [assign Cues or Cue Stacks](#) to playbacks.

## Include

An [action button](#) for including previously programmed show data back into the programmer.

Used to edit Cues. See [Including Cues](#).

## Update

Used as part of the edit process to update a Cue that has been included into the programmer. See [Including Cues](#).

## Copy

An [action button](#) for copying show data.

Used to [copy Cue Stacks between Playbacks](#), and to [copy other items](#).

### **Move**

An [action button](#) for moving show data.

Used to [move Cue Stacks between Playbacks](#), and to [move other items](#).

### **Go**

Used to activate a playback. Also used to start the next step in a Cue Stack when the step has been programmed to halt, or after the user has pressed the Pause button.

### **Pause**

Used to pause the execution of a Cue Stack.

### **Sel**

Used to make the playback the [current playback](#). This enables the Cue Stack on the Playback to be viewed in the Cue Stack Window and the current Cue in that Cue Stack to be viewed in the Cue Window.

Pressing and holding a Sel button causes the Cue Stack Window / Cue Window to be temporarily made active until the button is released. The Cue Stack / Cue Window shows data for the playback associated with the Sel button.

This enables easy modifications of Cue and Cue Stack parameters such as FX size and chase speed.

Also used when programming for determining which playback to [record a Cue](#) onto.

### **Flash**

Used to temporarily activate playbacks by [adding or swapping](#) in the Cue Stack from the playback to the outputs.

### **Grand Flash**

Used to temporarily flash the Grand Master – has the same effect as putting the Grand Master to full.

Exact behaviour will depend on the [configuration of the masters](#).

### **Sub Flash**

Used to temporarily flash the Sub Master – has the same effect as putting the Sub Master to full.

Exact behaviour will depend on the [configuration of the masters](#).

### **Next Page**

Used to select the page of playbacks. See the [page select overview](#) for how pages work.

### Prev Page

Used to select the page of playbacks. See the [page select overview](#) for how pages work.

### Manual Go

This Go button is part of the [manual control](#) section and controls the [current playback](#). It has the same functionality as the Go button associated with a playback. It provides Go functionality for playbacks that do not have Go buttons.

### Manual Pause

This Pause button is part of the [manual control](#) section and controls the [current playback](#). It has the same functionality as the Pause button associated with a playback. It provides Pause functionality for playbacks that do not have Pause buttons.

### Big Go

This Go button is part of the [manual control](#) section and controls the [current playback](#). It has the same functionality as the Go button associated with a playback.

It is designed to be used for theatre style operation where one big GO button is important for cueing a show.

### Fast Forward

The Fast Forward button is part of the [manual control](#) section and controls the [current playback](#). It is used to bump a Cue Stack to the next step immediately without fading. It is particularly useful when editing a Cue Stack to bump through Cues to find the one to edit.

### Fast Back

The Fast Back button is part of the [manual control](#) section and controls the [current playback](#). It is used to bump a Cue Stack to the previous step immediately without fading. It is particularly useful when editing a Cue Stack to bump through Cues to find the one to edit.

### Add / Swap

The Add / Swap buttons controls the function of flash buttons. See also the [Add / Swap overview](#).

### DBO

The [Console Blackout Button](#), used for, surprisingly, black-outs.

### Numeric keys

Used for entering values for parameters. The console allows values to be entered before selecting the item to set on screen thus making configuration of parameters quick and easy,

Can also be used for [selecting dimmers](#) and selecting [groups](#).

Used for entering [gel numbers](#). Numbers are assumed to be Lee gel numbers unless preceded by a dot in which case they are assumed to be rosco gel numbers.

### Enter

The enter key is used for [selecting items](#) and to finish off an action – such as recording a window item, or editing a parameter value.

### Thru

The Thru key is used to select ranges of dimmers when [selecting dimmers](#).

### @

The @ key is used to specify levels for [dimmers](#).

### Full

The full key is used to indicate 100% when setting levels for [dimmers](#).

### Page Left

This key scrolls the active Window to the left. See [Cursor Control](#).

### Page Right

This key scrolls the active Window to the right. See [Cursor Control](#).

### Cursor Keys

Used to move the cursor around the active Window. See [Cursor Control](#).

### Top Soft

The function of these buttons is soft – i.e. it changes according to the active Window and the current view in that window. The top [soft buttons](#) are generally used for menu items.

### Side Soft

The function of these buttons is soft – i.e. it changes according to the active Window and the current view in that window.

The side [soft buttons](#) are closely associated with the encoders adjacent to them. For example, in the Beam Window on of the encoder controls the gobo attribute of intelligent heads. Pressing the soft button bumps the gobo wheel onto the next gobo. Pressing SHIFT and the soft button bumps the gobo wheel back to the previous gobo.

## **25 Licensing**

The console runs under the Debian Linux operating system (except for the PC version) [www.debian.org](http://www.debian.org)

The software also utilises the MicroWindows library. [www.microwindows.org](http://www.microwindows.org)

Linux and MicroWindows are subject to the GNU Public License (GPL).

## 26 Glossary

Active	Function of loading all parameters for selected heads into the programmer.
Art-Net	A protocol for transporting DMX over ethernet LAN.
Attributes	Intelligent heads support a number of different functions that can be controlled via DMX - typically pan, tilt, colour, gobo etc.. Each of these functions that can be controlled by a separate DMX channel is referred to as an attribute.
Attribute bank	In the Attributes Window attributes of an intelligent head are divided up into Attribute Banks with two attributes each.
Attribute type	Attributes of intelligent heads are categorised into one of four types - Intensity, Position, Colour, Beam.
Battery back-up	The console supports battery back up, as an option. If fitted, this ensures that if there is a temporary interruption to the console power supply, the console continues to function. The battery will last for a specified time (usually 15 minutes) before the power should be restored or the console shut down.
Beam	An attribute type - attributes of an intelligent head that modify the make up of the beam are categorised as beam attributes. Examples are the shutter, iris, gobo wheels and prism wheels.
Calibration	A process of adjustment. Used on the MagicQ to adjust the touch screen so that touching the screen in a particular position gives an accurate result.
Channel	The basic unit of control on the console. Each Universe has 512 channels.
Chase	A sequence of steps to modify channel values over time. On the MagicQ a chase is made up of a sequence of Cues in a Cue Stack.
Colour	An attribute type - attributes of an intelligent head that modify the colour of the beam are categorised as colour attributes. Examples are colour wheels and colour mixing attributes.
Contrast	Contrast of a chase or an FX refers to how changes are made to the output channels when moving from step to step of a chase or FX.  Contrast of 100% indicates a smooth fade from one value to the next. Contrast of 0% indicates a snap from one value to the next.  The contrast control for the wing LCD screens enables the viewing angle of the screens to be modified.
Cue	The basic unit of storage on the console. A Cue stores level, timing and FX information for a single look.
Cue Stack	A sequence of Cues that can be played in order.
Cue Store	A list of all the Cues stored on the console.
Cue Stack Store	A list of all the Cue Stacks stored on the console.
DBO	Dead Black Out. The DBO button when pressed causes all HTP channels to be set to zero. On release all HTP channels are returned to their previous values.

Console Lamp	Low voltage lamp which connects into the rear panel. Used to light up the console surface. The console supports 2 or more console lamps depending on the number of attached wings.
DMX	DMX512 protocol.
Encoder	Rotary dial used for easy control of parameters.
Ethernet	A method of connecting data equipment together in the form of a Local Area Network (LAN).
Fan	Method of modifying parameters using encoders whereby different changes are applied to the selected heads such that the parameter is fanned across the heads.
File Manager	A Window used for organising show data stored on the MagicQ internal disc and on external USB sticks.
Flip	For moving heads with 360 degree pan movement there is more than one setting for the pan and tilt attributes for each physical position. Flip modifies the pan and tilt attributes to the alternate settings.
FX	FX is short for EFFECTS. The FX generator enables complex variations to be applied to parameters over time. For example a circle FX applied to the position attributes of a moving head causes it to move in a circle.
Gel	Coloured film that is placed in front of lights to modify the colour of the beam. The MagicQ stores a Gel colour for each dimmer, which makes identification and programming easy.
Generic	A generic dimmer channel. A head with a single channel which controls a dimmer from 0 to 100%.
Grand Master	The master fader which controls HTP levels for the entire console.
Gobo	A patterned object placed in front of a light source to modify the shape of the beam. Intelligent heads typically contain one or more wheels of gobos.
Head	An intelligent head
Include	Loading a Cue into the Programmer.
Intensity	An attribute type - the attribute of an intelligent head that controls the intensity of the mean. Often referred to as the dimmer.
Keyboard	The console includes an external keyboard, which connects into a socket on the back panel marked keyboard.
Keypad	The numerical keypad situated to the bottom left of the console. The layout of the keypad is similar to that found on standard PC keyboards with the addition of @, THRU and FULL buttons for quick control of lamp intensities.
LAN	Local Area Network
MagicQ PC	The PC version of the MagicQ console – enables editing and running of shows from PCs.
Mark Cue	A special Cue for preloading LTP values prior to the following Cue.
Master	The Playback Master can be configured to control the HTP level of the Playbacks or the HTP level of Add/Swap buttons.
Merge	A method of combining input and output channels. The console supports output of any input channels on any output channels.

Mouse	Pointing device used to select items on a screen. The MagicQ supports an optional mouse for users who do not wish to use the touch screen.
Move When Dark	A Cue Stack Option that enables automatic pre-loading of LTP values for following Cues when heads are at zero intensity.
Multi Windows	MagicQ allows any of the Windows to be moved onto a remote PC using the MagicQ Multi Window PC application.
Page	The MagicQ supports multiple pages of Playbacks. The page can be selected through buttons or through the Page Window.  The MagicQ also supports multiple pages of attributes in the Attr Window and the Beam Window.
Parameter	A value of a function that can be changed. Typically used to describe the parameters of an FX - such as size and speed.
Patch	The way of setting up the console so that it knows what lights are connected to it. The MagicQ supports a complete Window, the Patch Window for controlling patching.
PathPort	A protocol for transporting DMX over ethernet LAN.
Palette	The console supports Position, Colour and Beam palettes. Entries in each palette can be used to quickly store and recall your favourite looks.
Playback	A fader or button which activates a Cue Stack. The console supports physical playbacks (faders and buttons) and also virtual playbacks through the Playbacks window.
Position	An attribute type - attributes of an intelligent head that modify the position of the beam are categorised as position attributes. Pan and Tilt are Pan Lo and Tilt Lo are normally the only attributes of this type.
Programmer	The functional area of the MagicQ where show data is set up before it is recorded into Cues.
Record	Record button is used to record items into memory.
Snapshot	Loading the current outputs into the Programmer.
Spread	Sometimes referred to as offset on other consoles.
Stack	Short for Cue Stack.
Stack Store	Short for Cue Stack Store.
Touch Screen	The display supports a touch screen enabling functions of the console to be accessed by simply pressing the screen in the appropriate place.
Universe	A collection of 512 DMX channels.
USB	Universal Serial Bus - a serial bus available on all new PCs and lap-tops since around 1996.
USB stick	A USB device for storing show data and for transferring data to or from PCs.
Views	The console support several views for each Window, selectable using the top left soft buttons.  In addition the console stores complete Window Layouts comprising the details of Window position and sizes. These can be recalled using CTRL and the top soft buttons.
Wing	As an option, extra fader wings can be added to the MagicQ. Each fader supports 24 playbacks and associated buttons. Up to 8 wings can be supported giving 202 physical playbacks.